SOUTHWESTERN JOURNAL OF ANTHROPOLOGY

Published by the University of New Mexico and the Laboratory of Anthropology, Santa Fé, in the interest of general anthropology

VOLUME 7 • NUMBER 2 • SUMMER • 1951

The Chavin Problem: a Review and Critique
GORDON R. WILLEY 103

Antiquity of the Pineapple in America
J. L. COLLINS 143

Ceremonial Exchange in Western Arnhem Land
RONALD M. BERNDT 156

Patterns of Aggression and the War Cult in Southwestern Pueblos
FLORENCE HAWLEY ELLIS 177

Culture: its Empirical and Non-Empirical Character
CORNELIUS OSGOOD 202

UNIVERSITY OF NEW MEXICO PRESS
ALBUQUERQUE

THE SOUTHWESTERN JOURNAL OF ANTHROPOLOGY is designed to include articles in all branches of anthropology—ethnology, archaeology, folklore, linguistics, physical anthropology, and anthropogeography—relating to peoples and cultures, past and present, in any region. It is offered as a vehicle of expression for anthropologists in all parts of the world.

Manuscripts and other editorial materials should be addressed to the Editor, LESLIE SPIER, University of New Mexico, Albuquerque, New Mexico.

Subscriptions: $4.00 a calendar year (single number, $1.00). Foreign subscriptions, 1 £ sterling or its equivalent in local currency. Subscriptions should be sent to W. W. HILL, University of New Mexico, Albuquerque, New Mexico. (Remittances should be made payable to the SOUTHWESTERN JOURNAL OF ANTHROPOLOGY.

Issued in quarterly numbers: Spring, Summer, Autumn, Winter of each year.

Microfilm copies of whole volumes of the SOUTHWESTERN JOURNAL OF ANTHROPOLOGY may be purchased for permanent files by libraries and other subscribers from UNIVERSITY MICROFILMS, 313 N. First Street, Ann Arbor, Michigan, to whom inquiries should be addressed.

Entered as second-class matter June 17, 1947, at Albuquerque, New Mexico, under Act of Congress of July 16, 1894.

SOUTHWESTERN JOURNAL
OF ANTHROPOLOGY

VOLUME 7 • NUMBER 2 • SUMMER • 1951

THE CHAVÍN PROBLEM: A REVIEW AND CRITIQUE

GORDON R. WILLEY

INTRODUCTION

IN PERUVIAN ARCHAEOLOGY the term Chavín, derived from the site of Chavín de Huántar, has come to stand not for a single, easily definable concept but for a series of concepts. It has been used to denote an art style, an archaeological period, an "horizon," a "culture," a "basic or root culture," a "civilization," and an "empire." As there is divergence of opinion on what is meant by Chavín, on its stylistic identifications, on chronology and distribution, on associated cultural contexts, and on functional interpretation, it seems desirable at this time to examine just what has been or can be subsumed under the Chavín designation. This essay takes as its purpose such a review and critical appraisal of the problem.*

DEVELOPMENT OF THE CHAVÍN CONCEPTS

J. C. Tello—The late Dr Julio C. Tello was the foremost proponent of Chavín as a civilization basic to Andean development.[1] Middendorf[2] may have been the first to conceive of a widespread Chavín culture and pre-Incaic empire, but the elaboration of the theme was Tello's.

In Tello's earlier writings[3] he placed Classic Chavín, as it was known from the stone monuments of Chavín de Huántar and from the Cupisnique pottery of the coast, as a culture of the "Second Epoch." At that time Tello's "First

* I am indebted to Drs Donald Collier and Wendell C. Bennett for numerous suggestions and points of fact. Dr Irving Rouse and Mr Michael Coe also gave me the benefit of their criticisms.

1 Kroeber, 1944, pp. 81-82.

2 Middendorf, 1893-95.

3 Tello, 1922.

Epoch" cultures were "Archaic Andean" (represented by Aija stone sculpture and three-color negative painting of the Callejón de Huaylas) and "Pre-Chavín" (undescribed). Somewhat later Tello[4] dropped the "Pre-Chavín" concept, but "Archaic North Andean" still remained as anterior to Classic Chavín.[5] By "Archaic North Andean" it is clear that Tello referred to the three-colored negative painted ware (the Recuay style), not just the plain tripod vessels of the north highlands.[5a] For example, a Recuay three-color modelled cat-head is specifically indicated as a crude or "embryonic" manifestation of the strain that was later to climax in Classic Chavín.[6] This same chronological system assigned Wari, Pucara, and "the first period of Tiahuanaco" as being on the same time level with "Archaic North Andean," while Chongoyape, Paracas, and the shell mounds of Ancon and Supe were equated with Classic Chavín.[7]

Origen y Desarrollo de Las Civilizaciones Prehistoricas Andinas and *Discovery of the Chavín Culture in Peru* show an important change in Tello's chronological thinking. Recuay and Aija are now shifted to a later position on the time chart, and Classic Chavín is given precedence as the earliest of north Peruvian cultures.[8] This revision was probably the result of Tello's Nepeña Valley excavations.[9] There he found what he considered as Chavín, or Chavín-related, materials in the lowest archaeological levels. In referring to these discoveries, he states:

> These considerations . . . made equally essential the intensive exploration of the watersheds of the Cordillera Negra and the Callejón de Huaylas; for . . . the remains of Chavín culture must lie beneath strata corresponding to the cultures that had so far appeared there to be the predominant and oldest ones.[10]

Some lingering doubt may have remained about Recuay, for in his concluding summary to the 1943 article, although he drives home the uniqueness and chronological primacy of the "Chavín civilization" with:

---

4 Tello, 1923, 1929.

5 Tello, 1923, pp. 204 ff.

5a Later Tello became dubious of the inclusion of three-color negative in "Archaic" but stuck to the concept of the plain tripod ware as belonging.

6 Tello, 1923, p. 259, fig. 58.

7 Tello, 1929, pp. 24-25; Tello, 1930.

8 Tello, 1940, see pl. 7.

9 Many of Dr Tello's writings were published in the Lima newspapers as, in effect, interim excavation reports. An examination of these might verify the above point. Unfortunately, these works are not at my disposal.

10 Tello, 1943, p. 139. Tello apparently substantiated this for he says farther along: "In the buildings discovered in the Callejón de Huaylas . . . the real Chavín structures are hidden under Recuay structures . . ." (*idem*, p. 155).

Remains of the Chavín civilizations are found everywhere buried under later remains as different in type as if they were completely unrelated,

he adds the qualification:

Yet certain facts given below lead to the presumption that a stage of transition once existed between the Chavín and the Recuay-Pasto civilizations. In some aspects they seem to prove that the latter is derived from the former, or that, having had different origins, they for some time were contemporaneous and intermingled.[11]

Tello's opinions on the origins and diffusions of Chavín go back to his first chronological-developmental chart,[12] in which he indicated fundamental influences coming into the Peruvian highlands from the Amazonian forest zone. *Wira-Kocha,* which is primarily a tracing out of the religious theme in Andean culture, using ethnographic and traditional sources as well as the archaeological iconography, leans heavily on the theme of ancient ties with and inspirations from the tropical forest peoples to the east. Specifically, Tello saw these influences in the archaeology of the east Andean slopes and adjoining lowlands. Pottery of Kotosh, near Huanuco, he considered as related to both the Amazon lowlands and Chavín; styles of the Río Ahuaimo (tributary to the Ucayalí) and pottery from the Napo-Aguarico region had, in his words:

. . . intimate connection on the one side with Marajó pottery and on the other with Chavín pottery and with certain archaic forms of Recuay pottery.[13]

Tello's extension of the geographical range of Chavín does not always carry with it an explicit statement as to the directions in which these Chavín influences moved. As far as the Amazon is concerned, it is likely that he thought of such a distant style as Marajó as springing from the same common source as Peruvian Chavín rather than as being the parent of it.[14] Other remote cultures and styles in which he saw Chavín similarities, such as Uhle's "Mayoid" sites of Ecuador,[15] Paracas, Pucara, and the Barreales of Argentina,[16] were probably considered as peripheral to the Chavín center in the north Peruvian highlands.

And with its extension in space, Tello also felt that Chavín influence had great time persistence. For example:

---

11 *Idem,* p. 158. The "facts given below" refer to some similarities of Recuay and Chavín vessel forms.

12 Tello, 1922, opp. p. 10.

13 Author's translation from Tello, 1940, pp. 635-636.

14 See Tello, 1940, pl. 7.

15 Tello, 1943, p. 158.

16 *Idem,* p. 159.

The better developed cultures of the north have received in all times the influence of Chavín: the best examples of Chimu ceramics, including with this name the Tallanes (Late Chimu) and the Mochicas (Early Chimu), retain with all definiteness the distinctive characteristics of that art.[17]

From this it is not clear if Tello believed that the north coast was subject to a constant flow of Chavín influences ranging over several culture periods, or if he conceived of this influence as having been implanted in the north coast continuum at an early time so that the later periods there show Chavín influence only indirectly. It is likely that he visualized the former. Tello returned constantly to the metaphor of the tree, to a distinctly organic concept of cultures, as Strong[18] has pointed out. One of his most important theoretical statements, the one which best sets forth this "organicism," is quoted in full:

> Two problems present themselves when we try to inquire about the age of cultures: the first refers to the age of each one individually; and the second, to the age in conjunction with a regional belt or zone. Each culture may be imagined to be a tree which in its development has passed through different stages and has put forth branches in tiers from the roots up to the top of the foliage. When one deals with the age of a culture one must take into account the age of the trunk or the stem as estimated by the branches put forth at the different stages of its development; and in so far as the age of a cultural whole is concerned one would have to inquire if the cultures have been coeval in their beginnings or roots, whether they appear at different periods or whether they are mixed and fused together, or over and under the branches of neighboring cultures. Up to the point investigation has reached in the Andean territory the cultures are multiple and probably very old in their majority. Although in many cases their remains appear superimposed, this does not necessarily mean a continuous or uninterrupted succession of cultural stems, but mere superpositions of branches derived from them which may or may not have been coeval in their origin. Young branches from old stems may be found superimposed on branches from relatively young trunks in a chronological position contrary to the true position and age of the mother cultures.[19]

From the standpoint of functional interpretations, Tello has not fully expressed, at least in print, just what he intended by the terms "Chavín culture," or "Chavín civilization." In his last important work he seems to have regarded Chavín, at least as found in the Nepeña Valley of the coast, to be a civilization brought down from the Andes by a migration of people.

The Nepeña discovery definitely cleared up the true character of the Chavín culture on the coast. In the first place, it was now proved that this culture was rich in

17 Author's translation from Tello, 1923, pp. 256-257.

18 Strong, 1948, p. 93.

19 Translated from Tello, 1940, p. 626; translation checked by F. L. Stagg y Casmaño.

representative material, that it was unmistakable in its distinctive features, and identical to the trans-Andine culture in its essential characteristics. . . . The Chavín people developed on virgin soil in the Nepeña Valley a civilization. . . .[20]

Tello's successor, Dra Rebecca Carrión Cachot, has enlarged upon this, employing the term "Chavín empire.[21] This was, as she states, a religious and not a political empire. It was, however, a civilization homogeneous in its arts, rites, religion, race, and probably language.

R. Larco Hoyle—In 1933 Larco Hoyle found Chavín-like polished black incised and relief decorated pottery in the Cupisnique quebrada of the Chicama Valley. Larco sees stylistic resemblances linking this Cupisnique pottery, the Chavín de Huántar stone carvings, and the mud reliefs of the Nepeña Valley temples. Unlike Tello, he believes that the genius of this art style was coastal, not highland or Amazonian. Larco conceives of early coastal populations as constituting the base upon which was propagated the idea of a religious cult characterized by the feline symbolism. The center of this cult he would place in the Nepeña Valley. In brief, Tello's highland center of Chavín de Huántar is Larco's later colony, settled by migrants from the coastal valley of Nepeña.[22]

Larco approaches the distributions of Chavín, or Nepeña, more cautiously than Tello. He remarks on the similarities to Paracas[23] and Chongoyape,[24] but ranges no farther. Of the temple and stone carvings of Cerro Sechín, Casma Valley, he sees a developmental connection with Punkurí and Cerro Blanco of Nepeña; but he would place Cerro Sechín as the earliest of these developmental stages, apparently prior to the advent of the feline deity.[25] As I interpret his writings, he holds for an early and relatively compressed time horizon for the diffusion and development of this feline cult. Early Mochica would be his uppermost chronological limit. Certain idea continuities, such as the Cupisnique feline deity changing to a Mochica anthropomorphized cat-god, are a peripheral part of his theories; but these are not conceived of as further manifestations of the same "culture" or "civilization" as in the Tello approach.

Functionally, as stated, Larco interprets the Nepeña (or Chavín) style as the imprint of a religious movement which spread a complex art form among peoples of generally similar, but regionally varied, culture.

---

20 Tello, 1943, p. 139.

21 Carrión Cachot, 1948, pp. 166 ff. This essay by Carrión contains a resumé of Chavín distributions and an analysis of Chavín design.

22 See Larco Hoyle, 1938, pp. 19-50.

23 *Idem*, pp. 30-31.

24 Larco Hoyle, 1941, p. 11.

25 Larco Hoyle, 1938, p. 50.

The North Americans—Most North American archaeologists in the Peruvian field have followed in the tradition of the German scholar, Max Uhle, particularly the Uhle scheme as it has been explained and enlarged by A. L. Kroeber.[26] The Uhle-Kroeber methodology is that of cross-dating regional culture sequences of Peru with stylistic time-markers or "horizon styles." The goal is to build a time-space framework of cultures as synchronously perfect as possible. The Incaic and Tiahuanaco styles were employed as horizons, but neither Uhle nor Kroeber utilized Chavín in this manner.[27] Similarly, Bennett[28] was doubtful of the early position assigned to Coast Chavín or Cupisnique by both Larco Hoyle and Tello. Later, Bennett's own work at Chavín de Huántar,[29] and Larco's publication of grave stratigraphy from the north coast,[30] brought him to a reconsideration of the Chavín chronological problem. In a paper which Bennett published in 1943, he put forward Chavín as a pan-Peruvian horizon, marking the bottommost known level of Peruvian sequences.[31] He saw the Chavín influences of this horizon ranging from Piura to Paracas on the coast and from Chavín de Huántar to Pucara in the highlands.[32]

Following this, the acceptance of the early chronological position of Chavín was general among the North Americans.[33] Several archaeological monographs on Peru resulting from the Institute of Andean Research program of 1941-42 explicitly or implicitly express this important reformulation,[34] and the papers of the symposium, *A Reappraisal of Peruvian Archaeology*,[35] take it as almost axiomatic. Thus, in a sense, the Tello and Larco concept of Chavín-influenced cultures as early and basic to Peruvian civilization dominated the field by 1948.

There are, however, significant differences. As far as can be determined by their writings, most North American students prefer a middle course on the

26 Uhle, 1910, 1913a; Kroeber, 1925, 1926a, b, c, 1930, 1944. An important exception is P. A. Means (1931). Means' approach is conceptually similar to Tello's in that he considered much of Peruvian culture to have been derived from a highland parent whose irradiations were geographically widespread and chronologically of great depth. To Means this was not Chavín but Tiahuanaco.

27 See Kroeber, 1927.

28 Bennett, 1939.

29 Bennett, 1944.

30 Larco Hoyle, 1941, pp. 249-250.

31 The only North American to come out for a chronologically basic position of Chavín-type finds prior to this was Strong (1925) in his consideration of the Early Ancon pottery; but he did not, at that time, recognize the Chavín affiliations of this ware.

32 Bennett (1943, 1944), in a doubt somewhat reminiscent of Tello's earlier speculations, was still unsure of Chavín-Recuay time relationships.

33 Kroeber, 1944; Strong, 1943.

34 Strong and Corbett, 1943; Willey, 1943; Rowe, 1944.

35 Bennett, 1948.

question of Chavín origins, maintaining a "wait and see" policy on the highland (Tello) versus coastal (Larco) theories.[36] Nor have they expressed a definite opinion on the mechanism of the Chavín spread (migration, trade, diffusion, etc.). Notes of limiting criticism on the Chavín horizon have been sounded by Willey and Rowe,[37] both authors being unconvinced of the value of a south coast or south highland extension of the horizon. In a similar vein, Collier denies Tello's extension of the Chavín style to ceramics in Ecuador.[38]

North American opinion on the functional significance of the widespread Chavín style manifestations is closer to that of Larco than to that of Tello. There is a hesitancy in calling it a "culture" or a "civilization." Willey and Bennett[39] have both made the inferences that Peruvian society of the Chavín period was organized upon a limited local basis, that there was no widespread political unity, and that Chavín art was a part of the symbolic system of a religious cult that diffused from region to region.

CHAVÍN AS AN HORIZON STYLE

For this discussion Chavín style is defined as being identical to, or closely resembling, the designs of the stone carvings of Chavín de Huántar.[40] A style, for purposes of analysis, may be broken down into three component aspects: technology, representation, and configuration. Technology refers to materials (stone, wood, etc.) and techniques (carving, incising, etc.). Representation is the subject matter or content of style. It may be inspired by the artist's observations of nature (animals, men, etc.) or develop from his imagination (demons, composite beings, geometrical abstractions). Configuration is the manner in which the representations are expressed. Technological and representational features may be duplicated in many styles; but the configuration is the unique pattern that is not repeated outside the limits of a specific style. The technology of Chavín style at Chavín de Huántar is largely flat carving in stone, but the combination of this technique and this material is known in many other Peruvian styles. Representationally, felines, humans, birds, serpents, and fantastic composites of these characterize Chavín, yet all are depicted outside of Chavín. As

36 Bennett and Bird, 1949, pp. 137-139.

37 Willey, 1948, p. 10, table 1; Rowe, 1950.

38 Collier, 1948, pp. 82-83.

39 Willey, 1948; Bennett and Bird, 1949.

40 This is a much more limited definition than that given by Tello (1943, pp. 154-157) under the heading, "Characteristics of the Chavín Civilization." In that, Tello describes architecture, ceramics, sculptural techniques, and the art motives or representations. These last two, techniques and representations, are comparable to the "technological" and "representational" aspects of style as I have used these concepts in this paper.

FIG. 1. Map of central Andes and adjacent lowlands showing location of sites mentioned in the text. The names of sites or regions where indisputable evidence of the Chavín art style has been reported are underlined.

opposed to this, Chavín art is uniquely distinguished in its configuration by the way its subjects are conceived and portrayed. This is a matter of line, of composition, of emphasis. It is the curvilinear forms, the massive heads, the intricately disposed small heads, the locked and curved fangs, the claw feet, the prominent nostrils, and the eccentric eyes. It is all of these and it is more; it is these elements and motives in their special system. Such is the essence of the Chavín style. It belongs to no other.

The historical uniqueness of stylistic pattern is the fundamental assumption underlying the concept of the "horizon style."[41] As the result of this uniqueness, the presence of any style in two or more places has a high synchronic value. Like any cultural form or pattern, the Chavín style is a part of a continuum. It probably has prototypes and certainly has descendants; yet these, though perhaps bearing technological and representational similarity to Chavín, are themselves distinct configurations. If we are interested in the Chavín style as a coefficient of time, it is its peculiar configurative aspect that we must concentrate upon. Its origins and continuities are legitimate and interesting inquiries, but they may be most effectively treated as separate problems.

Thus, in this analysis of Chavín as an horizon style, I propose to consider only those manifestations which qualify from the configurational point of view. Each stylistic manifestation will be described briefly and placed in its immediate cultural context. We will then plot the geographical and chronological positions of these evidences of Chavín style to determine the case for Chavín as a synchronous horizon.

Chavín de Huántar—This site is on a tributary of the Marañon River in the north highlands of Peru. As the type station for the Chavín style, it is our "typological standard" for comparison.

The Chavín stylistic manifestations are human heads of stone carved in the round with tenons for wall insertion and flat incision-champlévé carved lintels, cornice slabs, and monoliths. The style is primarily curvilinear, although containing some rectilinear elements. The feline design is almost universal in the flat carvings. Certain portions of the feline, such as eyes and teeth, are emphasized. Sometimes the feline head is adorned with the bill and wings of a condor, a snake body, or fish tail and fins. Eyes are frequently portrayed with an eccentric pupil; the great fanged teeth are interlocked; the snout is broad (front view) or blunt (profile); from the head and back of the animal are scroll-like appendages or serpent heads; and the feet are heavy and claw-like.[42]

41 See Kroeber, 1944, pp. 108 ff; Willey, 1945.

42 See Tello, 1923, pp. 256-320; Kroeber, 1944, pp. 82-90; Bennett, 1944, pp. 88-89.

The site itself is obviously a great ceremonial center. Stone-faced buildings of a platform mound type are arranged around a rectangular sunken court. The platform mounds have interior galleries, and rooms are on two or three levels connected by ramps or stairways. The facings of the walls, made of dressed stone blocks, alternate bands of thick and thin stones.[43]

The ceramics associated with these sculptures and buildings are monochromes of black, red, or brown and include open flat-bottomed bowls, pucos, sub-globular bowls, globular bowls with flared rims, constricted collar jars, and simple spout jars. The stirrup-spout form is also represented.[44] Decorative techniques are fine and broad-line incision, dentate or rocker-stamping, punctation or gouging, color zoning, strip applique, fingernail impressions, and low relief modelling. Designs are circles-and-dots, triangles, diamonds, rectangles, criss-crosses, loops, volutes, and segments of stylized life forms unrecognizable in sherd fragments.[45] Stylistically verifiable Chavín designs also obtain, but, apparently, are rather rare. Tello[46] illustrates a bottle with a flowing line feline head, highly stylized; Bennett,[47] a more realistic anthropomorphic feline face sherd with characteristic interlocked fangs; and Carrión,[48] stylized feline heads.

Artifacts other than ceramics are not reported except for a few pieces of carved bone inlaid with turquoise and shell.[49]

There remain the remarkable Brummer or Bliss-Simkhovitch collections of gold artifacts.[50] These objects were at one time in the possession of a private collector in Trujillo, Peru, and were purported to have come from the site of Chavín de Huántar. Among the specimens are gorgets, ear discs, nose pendants, tweezers, spoons, and beads. They are decorated with embossed, incised, and champlévé designs, many of which are fully in the style of the stone carvings of Chavín de Huántar.[51] Metallurgical techniques are similar to those of the Chongoyape gold pieces. As no other comparable gold of which there is record has ever been discovered at Chavín de Huántar, the associations of this material with the site are open to serious doubt. The only other collection which resembles

43 Bennett, 1943, 1944; Carrión, 1948, pp. 100-106.
44 See Carrión, 1948, pl. 14.
45 Bennett, 1944, pp. 81-87.
46 Tello, 1943, plate 18, a.
47 Bennett, 1944, fig. 30P.
48 Carrion, 1948, pl. 14.
49 Carrion, 1948, pp. 101-102. A carved feline effigy mortar of stone (*idem*, pl. 11, no. 11) and a smaller turquoise carving (Milliken, 1945, p. 163) may, or may not, have come from Chavín de Huántar.
50 Lothrop, 1951.
51 See *idem*, figs. 71-77.

the Bliss-Simkhovitch lot comes from Chongoyape in the Lambayeque Valley of the north coast. There is no doubt as to the Chavín style affiliation and the collection is an important addition to our artistic and technological knowledge of the period; but it cannot, in view of inadequate field data, be fully incorporated as a part of the Chavín de Huántar site.

Yauya—This site, in the Marañon drainage north of Chavín de Huántar, is represented solely by a carved stela or column,[52] no longer *in situ*. It is a standing figure of a monster, perhaps a fish or a fish with feline attributes. Kroeber compares it to the Raimondi stela of Chavín de Huántar, ". . . in shape of total outline, complete filling of the field, erect posture, complete bilateral symmetry, and a certain formal stiffness. . . ."[53] As is well known, the Raimondi stela stands somewhat apart from other Chavín carvings in style, but is, nevertheless, linked to them. This solitary find seems to me to be justifiably incorporated within the Chavín style.

Pacopampa—From Pacopampa, in the northwest highlands, comes a series of carved stone mortars and pestles.[54] All of these are four-legged animals with the bowl or mortar basin in the back. Two have characteristic Chavín feline faces, and two of the pestles are similarly carved; the other mortar is a felinized owl with owl's beak but jaguar teeth. The stylistic relationship to the Chavín de Huántar carvings is close or identical. There is also a carved stone slab, "the feline of Pacopampa,"[54a] which has some resemblances to Chavín standing, front-view anthropomorphized figures.

Hualgayoc—Tello[55] has referred to "megalithic mausoleums" at Yanacancha in the Province of Hualgayoc. Previously he had described these as stone boxes cut in bedrock with slab covers.[55a] Apparently there is also a carved stone column or monolith at Yanacancha[56] which represents an anthropomorphic figure, but the style is not Chavín.

There is, however, a drawing of a small stone vessel from "Lives Farm, San Gregorio district, Province of Hualgayoc"[57] which is carved in the Chavín art style. Two serpent head appendages, identical with those on the carvings at Chavín de Huántar, are a part of the design motif.

---

52 Tello, 1923.
53 Kroeber, 1944, p. 87.
54 Larco Hoyle, 1946, pl. 65; Carrión, 1948, pl. 11.
54a Larco Hoyle, 1945, p. 3.
55 Tello, 1943.
55a Tello, 1937-38.
56 See illustration, Tello, 1937-38; Carrión, 1948, pl. 26.
57 Tello, 1943, pl. 18.

Kuntur Wasi—This ruin is situated on a hilltop in the upper Jequetepeque drainage, just over the divide from the Marañón system.[58] It is a triple-terraced pyramid which was surmounted by temple rooms or buildings, now destroyed. Pyramid facings are of irregular stones. Stone statues, heads, carved slabs, and lintels were found on the temple platforms or on the hill slope below. As Carrión has indicated, these carvings bear varying degrees of similarity to the sculptures of Chavín de Huántar. A flat carving[59] is a front view of a felinized condor (?) with tusk-like teeth, wide-spaced nostrils and eyes, and three pendant serpent heads. A head, sculptured in the round in the manner of some of the tenon heads from Chavín de Huántar, has the furrowed face and forehead, the curved fangs, and other typical Chavín details.[60] Both of these pieces strike one as dead-center on the Chavín style. The other carvings display significant differences. They are columnar statues or stone pillars carved in low relief fashion, as is the mode for Pucara, Aija, Tiahuanaco, or San Agustín of Colombia. Stylistically, they have more of a generalized resemblance to these than they do to Chavín. One such column has a representation on both sides.[61] The obverse carving has a head and face reminiscent of Chavín in its furrows and scrolled head treatment, and the claw-like feet of the anthropomorphized monster are also rendered in a Chavín manner. But the small head held in the monster's two hands, over his chest, is not a Chavín style feature. The reverse side of the column is a humanized serpent with nostrils and a mouth only vaguely Chavín. Another statue, a monkey (?) with prominent ribs, has only the jaguar fangs in common with Chavín.[62]

Pottery was found on the slopes below the temple, probably as a result of refuse, although graves were also discovered in the same area. Apparently, both the grave pottery and the surface fragments comprise the same series of types. The ware quality is not described, but as Carrión defines it as "classic Chavín" there is reason to believe that it is monochrome of red or of dark colors. In nearby sites, this "classic Chavín" pottery of Kuntur Wasi is said to underlie "sub-Chavín" types which are described as cream-colored with brown decoration.[63] Kuntur Wasi pottery includes: open flat-bottomed bowls, sub-globular bowls, constricted collar jars, globular bowls with angular or flared collars, simple spouted jars, and stirrup-mouthed jars with heavy everted lips. Aside from these forms, there are low pedestal bases and kero-shaped cups. Decoration, as far

58 Carrión, 1948, pp. 146 ff.
59 *Idem*, fig. 17.
60 *Idem*, fig. 16.
61 *Idem*, pl. 20.
62 *Idem*, pl. 21, b.
63 *Idem*, p. 153.

as can be determined, is by incision, punctation, pellet and strip applique, and low and full-round relief modelling. Designs are circles-and-dots, rectangles, triangles, diamonds, volutes, star elements, stylized life forms of undetermined nature, and modelled naturalistic life forms. From the illustrations offered, Chavín style feline, owl, condor, or serpent motives are missing. A possible exception is an incised (?) design on a stirrup-mouthed jar.[64] The modelled naturalistic life forms are abundant, but they are stylistically apart from Chavín.

In addition to pottery, Kuntur Wasi graves contained turquoise and bone beads and hammered gold ornaments with simple repoussé decorations.[65]

Moropón—This is a single pottery vessel from the Piura Valley of the far north coast.[66] It is a tall, stirrup-mouthed jar with the characteristic Cupisnique or Chavín thick, everted lip. It is decorated with a broad and fine-line (engraving?) incision, dentate rocker-stamping, relief modelling, and color zoning. The modelling may represent a plant or fruit. Around the base is a repetitive stylization of a Chavín life form.

Chongoyape—The Chongoyape finds consist of two lots of material from the vicinity of that small town in Lambayeque Valley. Both were discovered as the result of non-archaeological digging. The best documented lot came from deep burials and it includes gold ornaments with Chavín feline heads, pottery, a stone bowl, ring, and spoon, a jet mirror, and cinnabar pigments.[67] The Chongoyape ceramics are monochrome black or red polished wares, of plate and stirrup-mouth forms, and are decorated with dentate or rocker-stamped techniques, and low relief and full round modelling. One vessel has a modelled animal at the juncture of stirrup-spout and body. The thick, Cupisnique-type lip eversion is seen on both of the stirrup-mouth specimens.[68] The other collection of Chongoyape Chavín-like finds consists entirely of gold specimens. These are three cylindrical crowns, a head band, tweezers, and ear spools. The crowns and some of the ear spools have embossed or repoussé decorations of indubitable Chavín style. One crown[69] has a cat or humanoid head in profile with large, crossed fangs, eccentric pupil eye, and attached serpents. Another crown[70] bears an anthropomorphic jaguar standing in front view, holding staffs or spears. On the chest of this being is another stylized jaguar face.

64 *Idem*, pl. 22, no. 21.
65 *Idem*, p. 156.
66 See Larco Hoyle, 1941, fig. 209, for an illustration of this piece.
67 Lothrop, 1941, pp. 258-259.
68 *Idem*, pl. 19.
69 *Idem*, pl. 16, a.
70 *Idem*, pl. 16, c.

The metallurgical techniques of the Chongoyape objects include not only hammering and repoussé work but annealing and soldering or welding. A gold-headed pin had a silver shaft.[71]

Chiclayo—I am not certain to what finds or sites this designation refers. Possibly it is the Pickman Strombus shell from the air base at Chiclayo.[72] This shell bears an incised design of a man in a dancing or running position. The figure is blowing on a strombus shell trumpet. The outline of the man is bordered by an interlaced Chavín serpent design. The serpent head, with eccentric eye pupil, terminates the bordering design at the feet of the dancer. The man figure, itself, is not particularly in the Chavín style. Except, possibly, the feet, there are no feline or monstrous attributes. The face, seen in profile, is quite similar to the Sechín human figures.[73] The eye has a curved band extending down onto the cheek which is suggestive of, although it does not duplicate, Sechín portrayals. A flowing headdress, extending down over the back of the individual, is also like a similar headdress and sash from a Sechín carving. This specimen, more than any other, offers some sort of a stylistic link between Chavín and Cerro Sechín. Kroeber[74] has commented upon the Pickman Strombus and has also called attention to a small stone vase from the Chiclayo region[75] which offers a similar linkage. The Sechín features of this vase are a carved figure of a man in profile with a semi-circular, eccentric eye and three lines curving downward across the side of the face. Unlike the Sechín men, this individual has a jaguar fang.

Cupisnique—This culture, found at several sites and centering in the Chicama Valley, is best known for its pottery of Chavín affiliations. Cupisnique pottery is essentially monochrome, often polished, and includes simple forms such as the open, flat-bottomed bowl, sub-globular bowls, constricted collar jars, beakers, and simple spouted jars. The stirrup-spout vase is also common. Decoration is by broad and fine-line incision, engraving, rocker-stamping, punctation, hachure, brushing, color zoning, pellet applique, low relief modelling, and full round modelling. In general, modelling is more frequent and better executed than in the other culture groups we have reviewed. Larco states that there is evidence of the use of the mold in ceramic manufacture. Design includes circles-and-dots, rectilinear elements of various shapes, loops, volutes, scrolls, leaf or star-shaped figures, a number of modelled naturalistic life forms (animals, humans, houses,

71 *Idem*, pp. 257-260.
72 Illustrated by Tello, 1937, and Larco Hoyle, 1941, fig. 174.
73 See Tello, 1943, fig. 18.
74 Kroeber, 1944, pp. 49-50.
75 *Idem*, pl. 33.

plants), and the stylized life forms of the Chavín style (feline, owl, condor, serpent, and combinations).

Carved and ground stone beads, amulets, rings, ear ornaments, receptacles, and small mortars may, upon occasion, bear Chavín designs. Similarly, carved bone objects may be so decorated.

The association of metals is somewhat dubious, but, if they can be related to Cupisnique, they are simple ornaments of cut and beaten gold. Textiles are of cotton or wool in plain weave.

Houses were small and single-roomed both above-ground and subterranean. The walls were made of stone or conical adobes. Larco Hoye states that ". . . solid circular and pyramidal constructions were initiated in this cultural period."[76] These were made of conical adobes.

Mochica—The Mochica culture is represented by numerous sites in Chicama, Moche, and adjacent north coast valleys. A small number of Mochica stirrup-mouthed jars bear stylistically authentic Chavín designs.[77] These are bold but intricate curvilinear band designs of the sort called "ribbon relief" by Larco Hoyle. In some of them the feline representation has been completely reduced; in others the eye and curved fang elements are deducible. Most of these vessels are decorated with a combination of low relief incision and red and white painting. Vessel shape, including the proportionately high body and the delicate stirrup without the lip eversion, is characteristic of other Mochica ceramics.

The cultural context in which these finds are made is well known, as Mochica is an outstanding culture of the Peruvian Classic stage.[78] It features modelled and mold-made red and white ceramics. Realistic plastic and painted decoration is typical, with stirrup-spout jar and "florero" as the dominant vessel forms. A highly developed metallurgy, a lack of emphasis in stone carving, and mammoth pyramids of rectangular mold-made adobes are distinctive traits.

Cerro Blanco—Cerro Blanco, in the coastal Nepeña Valley, is a temple structure, presumably of the general platform type.[79] Carrión[80] describes it as having the form of a gigantic bird in flight. According to Tello,[81] the original building had been made of stone, and then the walls were covered with mud reliefs which were painted in multi-colors. These painted reliefs[82] are in the form of Chavín-

76 Larco Hoyle, 1946, p. 151.
77 Kroeber, 1926a, pp. 38-39; Larco Hoyle, 1941, fig. 31, for examples.
78 See Larco Hoyle, 1946, pp. 161-175; Bennett and Bird, 1949, pp. 153-181.
79 Bennett, 1939, p. 16.
80 Carrión, 1948, p. 107.
81 Tello, 1940, pp. 702-704; 1943, pp. 136-137.
82 Tello, 1943, pl. 13.

type eye and cross-fanged teeth elements. In the fill of this original building were black potsherds which are described as "Classic Chavín." The illustration[83] shows black polished and incised pieces similar to Chavín and Cupisnique ware, although the range of decoration types is rather limited and none bear Chavín feline or other zoömorphic stylizations. A second construction level at Cerro Blanco, built over the original unit, is characterized by conical adobes and smoothed plastered and painted walls. No ceramics were associated. The third level or uppermost covering of the site dates from late coastal periods.

Punkurí—This temple, in Nepeña, is described as having a lower level constructed of stone and decorated with mud reliefs and paint.[84] Its base was a platform of two terrace levels which are ascended by a wide stairway.[85] Midway in the stair was a painted feline head and paws made of stone and mud. At the feet of this feline figure was a burial accompanied by a carved stone mortar, a "handkerchief embroidered with turquoise sequins,"[86] and a strombus shell. There is no mention of pottery. The second building level walls were of conical adobes and bore incised designs on a plastered surface. A much later structure of rectangular adobes[87] and refuse overlay the whole.

The Punkurí jaguar head[88] is more realistically portrayed than is characteristic of Chavín felines, although this might be the result of the clay medium and the full-round rendering as opposed to the more usual flat carving. The stone mortar from the grave[89] has a rectilinear decoration that is not conclusively Chavín. Perhaps the best evidence for the Chavín art style is in the incised wall decorations on the conical adobe structure. Larco Hoyle[90] illustrates a section of these, although the designs are not distinct in the reproduction. However, he accompanies his wall illustration with another of a stirrup-mouthed jar (presumably Cupisnique of Chicama)[91] which, according to him, bears an incised decoration "similar to those found on the Temple of Punkurí." The designs on the vessel are definitely in the Chavín style.

Moxeke—In Casma Valley is Moxeke, a rectangular, terraced pyramid with rounded corners and higher platforms at the back of the summit. The structure is stone-faced, and it is known that the front upper platforms are made of conical

83 *Idem*, pl. 14, a.
84 Larco Hoyle, 1938, figs. 18, 19; Tello, 1943, pp. 137-138.
85 Carrión, 1948, p. 110.
86 Tello, 1943.
87 See Larco Hoyle, 1941, fig. 25.
88 Carrión, 1948, pl. 5.
89 Tello, 1943, fig. 17, a.
90 Larco Hoyle, 1941, fig. 26.
91 *Idem*, fig. 27.

adobes. The center façade is broken by a stairway. On each side of the stairway, six niches are set into the face of the third terrace. These niches contain partially destroyed adobe sculptures of a feline, a serpent, and a human torso. The sculptures had been painted in various colors, and the terrace walls between the niches were deeply incised with curvilinear designs painted white.[92]

No pottery is illustrated or described from Moxeke, but the mud and adobe reliefs in the terrace niches have a strong Chavín cast.

Pallca—Pallca, in Casma,[93] is another terraced and stone-faced pyramid with stone stairways. No conical adobes have been found, but on the summit platform are two small stepped pyramids of rectangular adobes. Collier believes these two upper pyramids to be later than the rest of the structure and to equate with late period Casma pottery found on the surface. Pottery found in excavations at the base of the main platform is polished, dark, monochrome ware. Some sherds were decorated with incision, punctation, rocker-stamping, and strip applique. Simple designs are noted,[94] and there are also stylized life forms, although none of these, as illustrated, are large enough to determine the complete nature of the representation. Their general appearance is, however, certainly that of Chavín ware; and a carved bone spatula[95] bears a thoroughly Chavín type felinized serpent head.

Humaya—Hacienda Humaya is in the Huaura Valley. All that I know concerning the site is that it produced a carved bone spoon or spatula and "Early Ancon Incised" pottery.[96] The spatula bears an anthropomorphized feline face in profile. The mouth and fang treatment is Chavín style. The eye has a series of four lines curving down across the face in the manner of Cerro Sechín. The pottery is not illustrated or described.

Puerto de Supe—There are five sites in the small desert hills on the coast near Puerto de Supe which concern us here. Uhle, Kroeber, Strong and Willey, and Willey and Corbett have described excavations and collections from these sites.[97] In this summation I draw principally upon the last and most detailed reference.

Near the beach, below the lighthouse (hence "Lighthouse Site") there is a

92 Based upon unpublished information furnished me by Donald Collier, December, 1950; also Tello, 1943, pl. 13, b; Kroeber, 1944, p. 47; Carrión, 1948, p. 110, pl. 6.

93 After Collier, unpublished information.

94 Tello, 1943, pl. 15.

95 *Idem*, pl. 24, a.

96 Lothrop, 1951, fig. 74, d; p. 233.

97 Uhle, 1925, pp. 260-263; Kroeber, 1925, pp. 254-256; 1944, pp. 118-120; Strong and Willey, 1943, pp. 11-14; Willey and Corbett, n.d.

shell and refuse midden and, a short distance away, a cemetery. Inland, facing onto the valley from dry quebradas, are two middens, Aspero and Li-31. A cemetery area is near the Aspero midden and has been named the Aspero cemetery. All of these sites, except the Aspero midden, contain black or dark polished pottery with various kinds of incised, punctated, rocker-stamped, color-zoning, and related treatments. This ware occurs in simple forms and also in the stirrup-mouthed jar. Complete Chavín feline stylizations were not detected upon sherds, but several fragments suggested portions of such designs. There is little doubt that this Puerto de Supe ware—"Early Supe," as it has been called—is Coastal Chavín pottery.

There is a miscellany of small bone and wooden objects from the Supe sites, but outstanding is a little bone palette with an incised feline-crab design of Chavín style.[98] A carved gourd from the Lighthouse cemetery is, likewise, in the Chavín style. Twined and some twilled basketry came from Supe graves, as did mats and netting. Decorated and colored plain-weave cotton textiles were abundant at Supe, including a fine, tapestry-woven piece with Chavín condor-feline designs. Two small sheets of beaten gold also were obtained in the Supe cemeteries.

The Supe people practiced simple inhumation burial and were a short-statured group with antero-posterior flattened skulls. Dwellings were small houses with stone foundations. No pyramids or public structures could be identified with these Supe sites.

Ancón—This shell midden area and cemetery are on a range of hills overlooking the later Ancón Necropolis of the central coast. Uhle[99] excavated here; Strong[100] defined the pottery from the midden as "Early Ancón"; and Willey made still other midden excavations.[101] More recently, Carrión[102] discovered a cemetery culturally related to the midden and located a short distance from it.

Early Ancón pottery is very much like that of Early Supe. It is monochrome, red or black. Vessel forms are simple bowls, jars, and bottles, although occasional stirrup-spouts occur. Decoration is largely by incision and related plastic techniques. Stylized life form designs probably include Chavín felines, birds, and serpents, although these are difficult to determine from sherd fragments. There is a small amount of naturalistic modelling.[103]

98 Kroeber, 1944, fig. 5, A.
99 Uhle, 1913b.
100 Strong, 1925, pp. 152-156.
101 Strong and Willey, 1943, pp. 15-17; Willey and Corbett, n.d.
102 Carrión, 1948.
103 See Uhle, 1913b, pl. 1, fig. 3; Strong, 1925, pl. 48, figs. 5, 7; Carrión, 1948, pl. 25.

Only a few ground stone artifacts (jet mirrors, pendants, a mace-head) were recovered from the Ancón midden, but mortars, pestles, and tripod plates came from the cemetery. Both woodcarving and bonecarving were well-developed crafts. A particularly fine bone spatula is carved in the style of a Chavín feline-serpent.[104] Basketry and cotton textiles came from the Ancón cemetery and midden, and spinning and weaving are further attested to by pottery spindle whorls. Carrión[105] illustrates a flat pottery stamp from the cemetery.

Burials were simple inhumations. Dwellings were probably like those of Early Supe. There are no evidences for pyramids or public buildings.

In the above we have described the art style of Chavín as it is manifested in seventeen sites or regions of Peru. Undoubtedly, there are other examples of Chavín art in the central Andes. Claims for some of these have been reported, and we will discuss them farther on; but it is with these adequately documented occurrences that the case for the Chavín horizon style must be made at the present time.

The geographical distribution of these finds is in north and central Peru. On the coast, it is from Lambayeque, or possibly Piura, to Ancón. In the highlands, the extension is even shorter, reaching from Pacopampa to Chavín de Huántar.

The chronological position of the Chavín finds is derived from superposition or stratigraphy at Chavín de Huántar, from sites in the Chicama Valley, and at Ancón and Supe. At Chavín de Huántar Bennett[106] found graves of the White-on-red horizon intrusive into Chavín period refuse. In the Chicama sector Larco Hoyle[107] has produced grave superimposition showing Cupisnique to underlie Salinar (a north coast White-on-red period). On the central coast, at both Ancón and Puerto de Supe, midden excavations by Willey and Corbett[108] show White-on-red ceramic types appearing only in the upper levels of deep refuse deposits pertaining to the Early Ancón-Supe period. These data would indicate a uniform pre-White-on-red horizon position for Chavín style finds of both sierra and coast in north and central Peru. Superpositional data from Punkurí, Cerro Blanco, and Moxeke are not so specific as these, but from all three locations the Chavín style materials seem to be at the very bottom of local culture sequences. The weight of the evidence thus argues for the placement of the Chavín style horizon at the beginning of Peruvian Formative cultures,

104 Carrión, 1948, pl. 24, k.
105 *Idem*, pl. 24, t.
106 Bennett, 1944, p. 92.
107 Larco Hoyle, 1941, pp. 249 ff.
108 Willey and Corbett, n.d.

a chronological conclusion generally agreed upon.[109] There is, however, at least one discrepant note to this conclusion—the Chavín-designed Mochica ceramics. These specimens come from *bona fide* Mochica grave contexts and are a part of Mochica culture; yet their decorations are clearly in the configuration of the Chavín style. The Mochica culture is not only later than Cupisnique, but the two are separated by the Salinar (White-on-red) period.

In analyzing the cultural context of the Chavín horizon style, similarities are most readily apparent in ceramics. These are best seen in comparisons among Cupisnique, Chavín de Huántar, Supe, and Ancón. These four sites or regions offer the most ample data on pottery of the Chavín horizon. In all of them the ware is dark red, brown, or black, and it is essentially monochrome. Polishing is a common feature, although not all the pottery of each site or region is polished. Open flat-bottomed bowls, constricted-collar jars, sub-globular bowls, simple-spout jars or bottles, and stirrup-spouts are linked traits. All seem to be common in all locations except the stirrup-spout which is typical of Cupisnique but rare elsewhere. Commonly held decorative techniques are fine- and broad-line incision, dentate or rocker-stamping, gouging or punctation, and the zoning of color bands (usually red) with incised lines. In addition, hachure and cross-hachure, brushing, engraving, strip applique, and low relief applique modelling are present in two or three of the four sites or regions. Designs continue this similarity. The circle or circle-and-dot, rectilinear elements (triangles, diamonds, rectangles, zigzags, etc.), loops, volutes, and scrolls are found throughout. A more distinctive linkage is in the Chavín feline design itself. This is usual in Cupisnique pottery; infrequent but present in the Chavín de Huántar collections; and very probably represented in the sherd samples from Ancón and Supe. In general, the Chavín de Huántar, Ancón, and Supe pottery complexes are alike. Cupisnique possesses most of the ceramic traits held by the other three, but places greater stress on naturalistic and full-round modelling, the stirrup-spout jar, and the stylized Chavín designs. In addition, some Cupisnique pottery is apparently mold-made.

Other Chavín horizon sites with pottery fit into the ceramic pattern as described above. The Moropón stirrup-mouthed jar is entirely within the Cupisnique typological range. The black or red monochrome vessels of Chongoyape have polished surface areas, stirrup-jar forms, dentate or rocker-stamping, and relief and full-round modelling. Pallca pottery is dark, monochrome, and decorated with incisions, rocker-stamping, and applique. Vessel designs are confined

109 See Bennett and Bird, 1949, fig. 19.

to rectilinear or morphologically unrecognizable curvilinear patterns, although it is likely that some of the latter are sections of Chavín stylized felines.

Kuntur Wasi presents a somewhat divergent picture. Apparently, the Kuntur Wasi ceramics are monochromes and of a dark hue, although this has not been explicitly stated. The simple bowl and jar forms of Early Ancón, Early Supe, Cupisnique, and Chavín de Huántar are present, as is the stirrup-spout; but there are new additions in the low pedestal-based bowl and jar and the kero-beaker. Kuntur Wasi incised decoration is quite limited in design elements and arrangements.[110] These are almost wholly rectilinear, except for very simple loops or volutes and the circle-and-dot. Recognizable feline motives on the flat surface are not included in the illustrations of the pottery, although there are one or two possible exceptions of what might be extreme stylizations of the Chavín feline. One of these[111] has the ribbon-banded, compact glyphic quality of the Chavín designs on Mochica vases. As opposed to flat design, modelled and applique decoration is varied. Some elements, like pressed pellet nodes, resemble Chavín wares, but, in general, the applique work is heavy and clumsy.[112] Whereas Chavín applique and relief modelling, as best exemplified in Cupisnique, has a quality of deeply sculptured surfaces, the Kuntur Wasi pieces emphasize the distinctly applied nature of the thick rolled fillets of clay. This latter treatment resembles Salinar, where the heads of felines or other animals are done with heavy applique strips.[113]

Mochica ceramics need not be discussed in detail. It is, with rare exceptions, oxidized pottery; much of it is mold-made; and the realistic painting and modelling is distinctly un-Chavín. Within this context the Chavín decorated pieces are rare.

In other aspects of cultural development we see a number of variables within the Chavín horizon. Monumental stone carving is confined to the north highlands at Chavín de Huántar, Yauya, and Kuntur Wasi. Mud sculptures and reliefs characterize the Nepeña and Casma Valleys. Small, artifactual carving in stone, bone, wood, or shell appears to be largely a coastal trait, distributed from Chiclayo to Ancón. Basketry and weaving are coastal. Pyramid building is northern. Highland structures are of stone with interior galleries while those of the coast are adobe. The pyramid idea seems not to have reached Supe and Ancón on the central coast. Throughout the sites or regions of the Chavín hori-

110 Carrión, 1948, pl. 23.
111 *Idem*, pl. 22, no. 21.
112 *Idem*, pl. 23, nos. 20, 21, 24, 25.
113 See Larco Hoyle, 1946, pl. 67, g.

zon burial is in simple pit graves with the exception of the adobe-lined tombs of Mochica. True metallurgy is known for certain only from Chongoyape,[114] with its welding or soldering techniques and limited use of silver in addition to gold, and from Mochica, with its alloys, copper, and multiple uses of these materials. Elsewhere, metal, if found, is in the form of simple beaten sheets or ornaments of gold.

Some of these variables may be explained environmentally or geographically. Stone monuments and structures of the north highlands are undoubtedly related to available building materials. The basketry and weaving of the coast can, perhaps, be correlated with preservation factors in archaeological sites. Pyramid building in the north and its absence farther south certainly suggests the origin or introduction of the trait in north Peru with a gradual spread to the south. The same may be true of Chongoyape gold. On the other hand, environment and geography cannot explain the numerous striking differences that set Mochica apart from the other cultures which share the Chavín art style. This can only be explained chronologically. In other words, the cultural context of Mochica fully supports the stratigraphy which places it as post-Cupisnique and later than the horizon level on which most of the other Chavín style manifestations fall.

We can, following this argument, conclude that the Chavín style is, for the most part, an effective time horizon marker. This is deduced from the stratigraphic evidence which is supported by a similarity of cultural context for most of the sites or regions in which Chavín style art is found. This similarity is strongest in ceramics and burial practices while notable variability is seen in architecture and metallurgy. Two cultures with Chavín style manifestations diverge rather sharply from this similarity of cultural context: Mochica and Kuntur Wasi. Kuntur Wasi is the less divergent of the two, but its ceramics show significant differences from Chavín and resemble Salinar, a cultural period of the north coast, which is post-Chavín. It is also noteworthy that monumental stone carving at Kuntur Wasi is not restricted to the Chavín style, but is extended to another and quite different style.

It seems certain that the Chavín style, of a configurationally pure sort, did, in a few cases, persist later than the chronological horizon line which we can draw for most Chavín-linked cultures and periods. This persistence is seen on the north coast where it lasted until Mochica times as a minor decorative feature. At Kuntur Wasi, in the north highlands, we have evidence of another such per-

114 The possible exception to this is the Bliss-Simkhovitch collection, which may have come from Chavín de Huántar.

sistence of the Chavín stylistic strain. It may be that Kuntur Wasi, or comparable sites located on the headwaters of the major north coast rivers, were the foci which transmitted the last impulses of a dying Chavín style down to the coast into Mochica. This does not, of course, explain the absence of Chavín designs in coastal Salinar[115] which I tentatively place as contemporaneous with Kuntur Wasi. It does, however offer a specific culture and region which could have carried the Chavín style across the time gap between the Chavín horizon proper and Mochica.

ADDITIONAL SITES RELATED TO THE CHAVÍN PROBLEM

The seventeen sites or regions which we have treated as showing indisputable Chavín stylistic affiliation by no means complete the list of sites or cultures for which Chavín relationship has been claimed. Most of these claims have been made by Tello or Carrión[116] although one or two come from other authors. These claims or sites may be divided into three categories. First, there are those put forward with the direct statement that they are stylistically Chavín, but for which little or no evidence is presented. Such claims could be perfectly valid, and may eventually be substantiated; however, for the present study I have depended upon published illustrations, and in the interests of a strict interpretation have decided to err on the side of conservative hesitancy rather than uncritical acceptance. Second, there are sites which display a cultural context or inventory similar to the majority of the Chavín horizon style sites, but which seem to lack any evidence of the diagnostic style. And, third, there are sites whose stylistic relationship to Chavín is debatable. We will review the claims and sites in this order.

Sites of the First Category

The Highlands—In the Marañón drainage, Tello and Carrión[117] mention several sites for which there is little or no identification.[118] Kumbemayo, which is one of these, refers to an aqueduct system cut into bedrock, some *in situ* carvings, and petroglyphs. From published photographs[119] of these features I recognize no Chavín stylistic affinity.

---

115 This absence is complete for ceramics, but there are some carved bone spatulas from Salinar graves which retain the Chavín style (Larco Hoyle, 1946, pl. 68, top).

116 Tello, 1940, 1943; Carrión, 1948.

117 Tello, *ibid.*; Carrión, *ibid.*

118 Chakas, Huambos, Cochabamba in Chachapoyas, Chokta in Celendín, Nunamarka in Pataz, Pasa Kancha, Yayno, Llammellin, Chalwa, Yaco, San Marcos, Wama Wain, and Gotush are all listed by Tello and Carrión as Chavín sites.

119 Reichlen, 1949.

In the Callejón de Huaylas, Tello[120] includes Inka Wain and Pomakayan as Chavín sites. The latter is a terraced, truncated pyramid with interior stone-lined galleries in which Classic Chavín ceramics are reported to have been found. The structure, is, however, very similar to those of the Wilkawain-Tiahuanaco period[121]

In the central highlands there are also a number of Chavín claims which have not yet been substantiated by the publication of the evidence.[122]

The Coast—On the north coast there are several Chavín claims which remain unsubstantiated. From La Ventana or Batan Grande, in Lambayeque, Tello reports Chavín sherds in a stratigraphy but does not illustrate these materials.[123] Larco[124] illustrates stirrup-mouthed vessels from the Pacasmayo Valley which are incised and modelled in the general Cupisnique manner but do not have Chavín-type feline designs. Tello[125] also notes the presence of Chavín sites in Santa Valley and illustrates a stone mortar with a carved bird design from Suchiman,[126] but the Chavín style of this piece is not a conclusive identification.

In addition to the better known sites of Nepeña and Casma Valleys, Tello[127] names Kusipampa, Pinchamarka, and La Carbonera from the former and La Cantina, Chankillo, and Sechín Alto from the latter. There is little information on any of these, but Kroeber[128] has reviewed Chankillo (Chancaillo) without finding Chavín evidence. Middendorf's[129] allusion to Chavín relationships may have influenced Tello here. Donald Collier has given me the following information on Sechín Alto. It is a large rectangular, stone-faced, stepped, pyramidal platform surmounted by several smaller two-level platforms. The interior structure is of conical adobes, and the pyramid is partially enclosed by a compound wall. Additional platform structures are within and outside of this compound. Bennett[133] includes this site as one of those "linked by the Chavín horizon"; but Collier (personal communication) states, "No excavation was done at this site and no surface pottery was found that might have been contemporaneous with it."

Choka Ispana, in the Huaura Valley, and Chimo Kapak, in the Pativilca-Supe

120 Tello, 1940, 1943.
121 See Bennett, 1944, p. 12.
122 These are San Luis de Shuaro, Satipo (Monabarriba), Waiwaka, and Junín (Tello, 1943; Carrión, 1948).
123 Tello, 1943, p. 154.
124 Larco Hoyle, 1941, figs. 15, 17.
125 Tello, 1940, 1943.
126 Tello, 1943, fig. 17b.
127 Tello, 1940, 1943.
128 Kroeber, 1944, pp. 52-53.
129 Middendorf, 1894, vol. 2, p. 307.
[footnote numbers 130-132 omitted]
133 Bennett and Bird, 1949, p. 124.

area, are two other sites named as Chavín by Tello[134] but upon which no specific information has appeared in print. Chimo Kapak (Chimu Capac) is known from the literature[135] as a mixed site, but no Chavín connections have been previously indicated.

Sites of the Second Category

Las Torrecitas, Chondorko, Santa-Apolonia—Recent stratigraphic excavations by the Reichlens[136] in these sites near Cajamarca have revealed a period of incised pottery underlying a developmental sequence of Cajamarca (Cursive) types. The chronological position of this incised pottery period approximates that of Chavín-influenced periods elsewhere in Peru.[137] Torrecitas-Chavín, as they have named the incised style, is a black, grey, or brown ware, smoothed or polished, which occurs in flat-based or hemispherical bowls or cups, sub-globular vases, deep pots, and large jars with sub-globular bodies and constricted and reflared collars. Decoration is by both broad and fine-line incision, punctations, gouge-marks, smooth and roughened zones, and zoned red or white color. Designs are volutes, scrolls, triangles, chevrons, parallel lines, and other simple motives. Modelling in high or low relief, and the more complex vessel forms, such as the stirrup-spout, are absent. Nor are there any designs which could be interpreted as Chavín style felines, humans, or other beings.[138] In short, although the pottery is technically very similar to the ware of Chavín de Huántar, the art style of Chavín is lacking.

The Reichlens have considered the possible chronological implications of this simplicity of their Torrecitas-Chavín, or "Chavínoid" style. They suggest that it may be a "primitive" or pre-classic form of Chavín pottery. As such, it might correspond to undescribed pottery which Tello[139] claimed to have found in early or "pre-classic" levels of the Chavín de Huántar site. On the other hand, Torrecitas-Chavín might be contemporaneous with, or later than, classic Chavín. All that we can be certain of is that its ceramic context is comparable to sites of the Chavín horizon.

Kotosh—In the vicinity of Huanuco, in one of several "artificial hillocks," Tello[140] found "an abundance of Chavín potsherds mixed with other types closely

134 Tello, 1940, 1943.

135 Kroeber, 1925, pp. 240 ff.

136 H. and P. Reichlen, 1949.

137 For example, the pottery of Reichlens' Cajamarca II period (1949, fig. 6) has pointed similarity to the Interlocking ceramic style of the central coast and their Period IV (1949, figs. 11, 12) shows a definite increment of Tiahuanaco. Thus, their Torrecitas-Chavín, or incised ware falls in about the proper sequence position for Chavín horizon contemporaneity.

138 H. and P. Reichlen, 1949, pp. 154-156, fig. 4.

139 Tello, 1940, p. 701.

140 Tello, 1943, p. 152.

resembling, on the one hand, incised and painted pottery of the Paracas caves [Paracas Cavernas?], and, on the other, incised and carved Amazonian pottery." The pottery which Tello illustrates[141] appears to be a monochrome ware decorated with incisions, punctations, hachure, brushing, color zoning, pellet applique, and low relief modelling. Designs are circles-and-dots, rectilinear bands, and what appear to be highly stylized life forms. There is an obvious generalized resemblance to Chavín de Huántar or Ancón pottery, but Chavín design motives of a classic sort (felines, etc.) are absent and the mention of painted types suggests another context. Tello implies in the caption to the illustration that other and more typically Chavín pottery was found in association.[142]

Donald Collier[142a] visited the Kotosh site in 1937. He describes it as being four kilometers southeast of Huanuco and consisting of two mounds, the larger of which is 50 by 25 by 5 meters. Collier observed stone-faced terraces on the mound and stone structures within it. He collected a sample of fifty sherds from the mound surface and from old excavations. These correspond closely to the types which Tello has illustrated plus smooth plain and polished monochrome types. Although Collier describes rim and shape forms as "suggesting the Chavínoid range," he found no Classic Chavín designs nor any painted ware.

Guañape—This is a cultural period in the Virú Valley which shows Cupisnique affiliations. Larco Hoyle[143] found such pottery in Virú Valley graves, Ford and Willey[144] surveyed several midden or house sites dating from this period, and Strong and Evans[145] uncovered a rectangular stone enclosure with Guañape pottery associated. Guañape pottery traits parallel those of Cupisnique and Ancón to a great extent except that stylized Chavín feline designs have not been recorded. This absence may be due only to the smallness of the decorated ware sample for the Guañape period.

Guañape house types are like those Larco Hoyle noted in Chicama for Cupisnique. No stone or conical adobe pyramids could be definitely associated with the period, although a few rather large rectangular stone-walled and adobe-walled enclosures may be Guañape public or ceremonial buildings.

Bellavista to Chilca—Southward along the coast from Ancón there are several shell midden sites that may pertain to our problem. Uhle described such a midden

141 *Idem*, pl. 19.
142 See also Tello, 1940, pp. 635-636.
142a Personal communication.
143 Larco Hoyle, 1946, p. 1949.
144 Ford and Willey, 1949.
145 Personal communication.

and its pottery at Bellavista, near Callao;[146] there is another at Chorrillos on the southern outskirts of Lima; and still more near Pachacamac, Cruz de Hueso, Pucusana, and Chilca.[147] All of these sites have simple monochrome pottery of a black or reddish color which is indistinguishable from the Early Ancón plain ware. Incised types occur at some of the sites, perhaps at all; but, to the best of my knowledge, there is no record of Chavín stylistic representations, in pottery or other materials, from any of these sites.

Sites of the Third Category

Cerro Sechín—Cerro Sechín is probably the most disputed Chavín claim. In a sense it is comparable to our sites of the "second category" in this survey in that the general cultural context appears to be akin to that of some of the Chavín horizontal sites.

A full description of Cerro Sechín has never been published, although Tello, Kroeber, and Carrión have all given brief accounts.[148] Donald Collier, who assisted in the original excavations, has enabled me to supplement these statements with additional notes and comments.[149]

Located at the foot of hill slopes in Casma Valley, the Cerro Sechín temple is a rectangular mass composed of a series of superimposed platforms. The basal platform is of earth rubble and along its north façade are a series of carved stone slabs. In the center of this north façade a broad stairway led to the top of the platform. Collier is of the opinion that these stairs were made of stone and heavily plastered with mud. Upper platforms of the temple were constructed of conical adobes and then plastered and painted. At one place, jaguar (or puma) figures, painted in red, black, and white, adorn the plastered walls.

Tello[150] reconstructs the history of the temple site and its environs as follows. The first occupation and construction was not at Cerro Sechín proper, but was located farther down the slope at some little distance from the present site. Here are the remains of a Classic Chavín period temple completely destroyed by the floods.[151] Cerro Sechín proper represents a second occupation on a higher hillside terrace. Subsequently, this building, too, was covered with alluvium, and a third occupation, now marked by dwellings and refuse, covered the site. According to Tello, the cultural associations of these three building stages are: (1) Classic

146 Uhle, 1910.
147 Tello, 1940, p. 679; 1943, p. 157; Strong and Willey, 1943, pp. 18-19.
148 Tello, 1943, pp. 139-150; Kroeber, 1944, p. 48; Carrión, 1948, p. 110.
149 Collier, personal communication, December, 1950.
150 Tello, 1943, pp. 148-150.
151 Ceramic evidence for this dating has not yet been illustrated.

Chavín, (2) sub-Chavín, and (3) Santa type. Thus, Cerro Sechín temple proper dates from the second stage, or from what Tello has called the sub-Chavín period.

Collier's observations on the pottery from the excavations distinguish three types of pottery. One of these types is a coarse red ware decorated with incisions and reed punctations. This is the pottery which Tello described as "a new kind of incised pottery known from surface rubbish-heaps in almost the whole Casma Valley."[152] From Tello's further statements this type can be equated in time with "sub-Santa," "sub-Chimu," and Inca.[153] Apparently, it is not involved with any of the three building stages to which we have just referred. A second style which Collier recognized was a three-color Tiahuanaco Epigonal variant. This is Tello's "Santa" type, associated with the third building stage. Collier's third type he describes as "an undecorated, polished ware, black through brown to red in color, with straight, somewhat thickened rims, largely from bowls." This is apparently the type which Tello called "sub-Chavín" and which he (Tello) correlated with the temple of Cerro Sechín and its carved stone monoliths. Collier, however, is hesitant to establish such a correlation between the Cerro Sechín temple and the plain, monochrome pottery.

Even if we accept the association of this sub-Chavín pottery and the Sechín pyramid and carvings, the picture is still very confused, owing to the definition of sub-Chavín. Tello[154] describes sub-Chavín pottery as

> . . . in every way resembling that discovered in the Teatino cemetery, in the Supe burial ground near Faro [Lighthouse site], where Uhle labored years ago, in various Nepeña and Santa cemeteries, and in the lowest layer of a cutting made by the La Leche River close to the Batan Grande Huaca [Lambayeque]. The rubbish, judging from the pottery, belongs to the Chavín culture in its second period, called by the writer sub-Chavín, to which also belong the vessels found by Bennett in the Gallinazo cemetery, in Virú.

No consistent style can be reconstructed from this. Teatino "Chavín," as Kroeber[156] has commented, is typologically and chronologically the equivalent of Middle Ancón I of the Coast Tiahuanaco horizon; Bennett's Gallinazo[157] is a negative horizon type; and Uhle's cemetery at the Faro, Supe is firmly linked to the Chavín style.[158] The typological and chronological gamut represented by

152 Tello, 1943, p. 145.
153 This is also the ware which Kroeber (1944, pl. 22) illustrates.
154 Tello, 1943, p. 144.
[footnote number 155 omitted]
156 Kroeber, 1944, pp. 43-45.
157 Bennett, 1939, pp. 54-75.
158 Willey and Corbett, n.d.

Teatino, Gallinazo, and Early Supe is tremendous; further, Tello's description would not coincide with Collier's plain monochrome ware of simple bowl shapes. The ceramics of Cerro Sechín, as they have been presented, certainly do not aid in the dating of the temple and its carvings.

Cerro Sechín's stone monuments are flat, unshaped slabs with low relief incised and champlévé designs. The designs comprise standing humans, separate heads (possibly representing severed or trophy heads), dismembered bodies, and rather simple geometrical figures. The style is more rigid and much less sophisticated than that of Chavín de Huántar. In it I see no close connections with Chavín.[159] As has been mentioned, the Pickman Strombus, the small stone vase from Chiclayo, and the Humaya bone spatula offer an interesting stylistic linkage in that all three pieces combine Sechín and Chavín elements. One other Peruvian piece, a carved bone spatula from the Huaca Prieta refuse mound of the Chicama Valley, has a design that is very reminiscent of the Sechín men figures.[160] This specimen cannot be dated exactly, but it probably belongs with the Cupisnique or coast Chavín period at that site.

Cerro Sechín's place in Peruvian chronology and its relationships to the Chavín horizons are unclear. The nature of the temple structure, with its use of stone, mud, and conical adobes, implies a fairly early date. The painted jaguars suggest Chavín. The plain monochrome pottery, which Tello calls sub-Chavín, sounds very much like the plain ware of a Chavín ceramic complex;[161] but there is some question as to whether or not it is associated with the temple. The Cerro Sechín carvings are not stylistically Chavín, nor do they resemble any other major Peruvian style. Resmemblances to this Sechín style are seen in occasional specimens from the north coast, some of which also combine Chavín decorative elements. We can only conclude that Cerro Sechín is either later than the Chavín horizon (as Tello suggests with his "sub-Chavín" concept) or that it is an earlier coastal style antedating and eventually blending with Chavín.[162] For reasons to be discussed later the second interpretation is favored.

Teatino or Lachay—This cemetery site is located on the north side of the Chancay Valley. The earliest graves of the cemetery are named by Tello as "sub-Chavín." As stated above, I have identified the incised grave pottery from this site as Middle Ancón I.[163] This pottery differs in ware, shape, and design

159 See also Kroeber, 1944, pp. 49-50.

160 Junius B. Bird, personal communication, January, 1951.

161 Collier (personal communication, December, 1950) states that a similar ware was found at the Casma Valley site of Pallka, along with incised sherds of the Chavín type.

162 See Larco Hoyle, 1938, p. 50; Bennett and Bird, 1949, p. 135.

163 See Kroeber, 1944, pp. 43-45.

from Coast or Highland Chavín ceramics. Strong[164] has presented evidence to ally it chronologically with Coast Tiahuanaco.

Chanapata—This early site, near Cuzco, was excavated by Rowe[165] who found stone faced terraces, bone tools, simple ground stone tools, obsidian points, pottery figurines, polished black incised and applique pottery, and white-on-red pottery. Presumably, Tello and Carrión have the black incised ware in mind when they consider Chanapata as a Chavín site. Chanapata blackware is found in open bowls, bottles, plates, and olla forms. These are somewhat like the vessel forms of Chavín de Huántar, but there are notable differences, such as the presence of strap handles on both the open bowls and ollas. Decoration is in both broad and fine-line incision, applique strips, punctation, and low relief modeling. Incised designs are stiff, rectilinear animals (cats), chevrons, diamonds, and rectangles. The cat bears no resemblance to the Chavín feline, in total stylized conception or in detail.

Pucara—This site, excavated by Kidder II,[166] appears to be a ceremonial center constructed of dressed stone blocks and incorporating such features as altars and subterranean burial vaults. The pottery is a polychrome black and yellow on red with color zones separated by fine-line incisions. Design centers upon the feline, which is rendered both in the flat and in high relief modelling; but the feline stylization[167] is not that of Chavín.

Paracas, Ocucaje—Paracas Cavernas style pottery is found at these two sites on the south coast. Close similarity with Ancón and Supe is seen in a flat-bottomed, dark-ware, incised bowl type;[168] but, for the most part, Paracas Cavernas ceramics are in a polychrome tradition. A fanged cat-face,[169] incised and painted, lacks the characteristic Chavín rendering. Associated also is negative painted pottery,[170] a decorative technique rarely found in the same context with Chavín types.

Socos, La Victoria—For Socos, the only reference which I have is the Carrión chart.[171] The design shown here, presumably from a pottery vessel, seems completely un-Chavín. La Victoria is mentioned only on the map.[172]

Non-Peruvian Styles and Cultures—Tello and Carrión[173] have both expressed

164 Strong, 1925, pp. 183-184.
165 Rowe, 1944.
166 Kidder, 1943.
167 See Bennett, 1946, pl. 37.
168 Kroeber, 1944, pl. 14F.
169 *Idem*, pl. 13E.
170 *Idem*, pl. 16.
171 Carrión, 1948, pl. 26.
172 *Idem*, pl. 27.
173 Tello, 1940, 1943; Carrión, 1948.

the opinion that several archaeological sites or cultures lying outside of Peru and, for the most part, beyond the borders of the central Andean area were component manifestations of the Chavín style, culture, civilization, or empire.

To the south, Tiahuanaco of Bolivia[174] and Barreales of northwest Argentina[175] are considered as Chavín outposts. The Early and Classic Tiahuanaco cultures and their stone sculptural and ceramic styles are well known.[176] The feline, condor, and serpent are represented in Tiahuanaco art, but their configuration is distinctively that recognized as Tiahuanaco, not Chavín. Tiahuanaco pottery is polychrome, and its vessel shapes are non-Chavín. Early Tiahuanaco may, possibly, be as early as the Chavín horizon; Classic Tiahuanaco is, almost certainly, later. Barreales is an incised, dark ware, and in these features it is reminiscent of Chavín. The designs on the vessels, while possible of central Andean inspiration, are not rendered in the Chavín style.[177]

From Moxos,[178] or Mojos, in the Bolivian lowlands, the ceramic types of Lower and Upper Velarde, Hernmarck, and Masicito are known from the work of Nordenskiöld and the resumés of Bennett and Howard.[179] Velarde and Hernmarck are painted ceramics. Lower Velarde is an isolated style which Bennett has equated, chronologically, with Derived Tiahuanaco. Hernmarck has rather general Amazonian affiliations. Masicito is an incised type, but I see no Chavín parallels.

The painted, carved, and modelled pottery of Marajó and the wares of Río Ahuaimo and Napo-Aguarico, which Tello mentioned,[180] seem to me to be quite unlike Chavín. If a similarity does exist it is so deeply buried by stylization, reduction, and modification that it loses meaning.

Nor do I see the strong and specific Chavín resemblances in the various regions of Ecuador to which Tello and Carrión refer.[181] The one possible exception is Carrión's Azuay illustration, but the provenience of this specimen is dubious.[182]

---

174 See Carrión, 1948, pl. 27.

175 Tello, 1943, p. 159.

176 Bennett, 1934.

177 See Márquez Miranda, 1946, pl. 142, fig. 63.

178 See Tello, 1940, p. 636; Carrión, 1948.

179 Nordenskiöld, 1913; Bennett, 1936; Howard, 1947.

180 Tello, 1940, p. 636; see Howard, 1947, pp. 42-44 for a review of these.

181 Tello (1940, p. 680; 1943, pp. 158-159) and Carrión (1948, p. 112, pl. 27) list the following Ecuadorean sites or regions as being stations of the Chavín stylistic influence: Azuay, Cerro Narrío, Alausí, Cuenca, Sigsig, Chordeleg, Saraguro, Manta, Elen Pata, Island of Puna, Punros de Mar, Chinguilanchi, Rircay, Uchucay, Manabí. See Collier, 1948, pp. 82 ff. for a critical discussion of this.

182 Carrión, 1948, pl. 26; cf. Collier, 1948, p. 83; Collier and Murra, 1943, pl. 10, no. 4.

CHAVÍN AS A TRADITION

We know that, as the configurative aspect of a style changes, a new style comes into being. Although a distinct entity, it emerges with a residue from the past. This continuity with the past, and by implication with the future, is the *tradition*. In this discussion we have conceived of the synchronous distribution of the Chavín art pattern through space as an horizon style. As such, it constituted one dimension of our inquiry. The complementary dimension, the diachronous continuity of Chavín through time, may be termed the Chavín tradition.

The diagnostics of a tradition are determined by the historical problem. For example, in attempting to demonstrate the linkage of a series of ceramic styles through Peruvian culture sequences, the confines of the tradition may be laid down as "white-on-red painting," "incising," or "plastic ornamentation."[183] The tradition limits are, here, determined by what we have in another context referred to as the "technological aspect of style." When we turn to the problem of a Chavín tradition, it is doubtful if it could be usefully defined by technological criteria. "Incision" or "carving" as determinants would provide us with such a wide-meshed screen that we would admit a super-abundance of irrelevant data. The field must be narrowed to utilize only the "representational aspect of the Chavín style," the feline motif and its combinations, as the core of the Chavín traditional continuum.

When we arrive at this point, we realize that this is what Tello has done. For him, the Chavín problem was the history of the feline deity in the development of Peruvian cultures. His greatest work, *Wira-Kocha*, is a profound essay upon the occurrence and reoccurrence of the feline god in all regions and in all periods of native Peru. He conceived of this deity as the binding and unifying force in Andean culture. This is diagrammatically expressed in Tello's first chronological-developmental chart.[184] In this he shows the monogenesis of the different branches of Peruvian culture from a single trunk, with the implication that all branches carry within themselves the idea of feline deity. Finally, in the epoch of the Inca, the chart illustrates the terminal coalescence of the multiple lines of cultural development so that they again form a single trunk under the same ancient feline god, now called Viracocha.

It has been noted that in his earlier writings Tello considered Chavín to be a "Second Epoch" culture, an esthetic refinement of the feline idea. Apparently, at this stage of his career, he was not certain as to the exact nature of the

183 Willey, 1945, pp. 53-55.
184 Tello, 1922, opp. p. 10.

monogenic mother-culture of the Andes. "Archaic North Andean" remained a tentative formulation, in spite of the fact that he sometimes identified it with Recuay pottery. Not until after the discoveries in the Nepeña Valley, with their obvious structural stratigraphy, did he become convinced that Chavín was the original and parent stock. At about the same time Tello's approach and methodology appear to coincide with the Uhle-Kroeber point of view. He had established a new horizon, comparable to Tiahuanaco and Inca, but underlying the established Early or Classic cultures; and he had characterized and defined this horizon as an extension of the striking art style of Chavín de Huántar. Yet, in spite of these surface indications that his interests had shifted to synchronous correlations, his statement on methodology[185] and his exposition of the Chavín problem[186] show no important change in his thinking. Tello remained convinced that stratigraphy was relatively unimportant in the understanding of Peruvian cultural development because his dominant interest was in continuity rather than periodicity. This is very clearly reflected in his observations on cultural "trees" and the confused intermingling of their "branches." As far as Chavín is concerned it is safe to assume that he was more interested in the total "tree" than in any chronological segments selected from it by a means as arbitrary as stratigraphy. The misunderstandings of Tello's theories on Chavín, largely held by North Americans, derive from the fact that he operated with two concepts, and was not at pains to keep them separate. Chavín as a tradition was to him paramount, while Chavín as an horizon style was of secondary importance.

The implications of much of this are seen in the Tello-Carrión Chavín claims which we have just reviewed. The feline representations of Pucara, Tiahuanaco, Chanapata, and Barreales may be a part of an historically related Chavín tradition which has crystallized in different styles as it has diffused outward in space or upward in time from its original hearth. This is a reasonable possibility and a valid working hypothesis. On the other hand, to consider them a part of the Chavín style horizon is untenable. This does not necessarily prove that all of them are chronologically later than the Chavín horizon. It does mean, however, that the presence of the feline representation in these various styles cannot be taken as proof of their contemporaneity or intimate historical connection with the Chavín style.

The problem has been complicated in still another way—by accepting the "technological aspect of style" as the style itself. This is, obviously, what Tello has done in the case of Teatino. Teatino incised pottery has neither the configura-

185 Tello, 1940, p. 626.
186 Tello, 1943.

tion nor (to my knowledge) the feline representations of Chavín style. The monochrome ware and the decorative technique, incision, have been used as the Chavín diagnostics.[187] In some cases this seems to be more justifiable than at Teatino where the Middle Ancón I-Coast Tiahuanaco typological and chronological coördinates are evident. Las Torrecitas, Kotosh, Guañape, and the Bellavista-Chilca sites are all reminiscent of the Chavín style because of the incised technique; but in all of these the total context of the culture, the specific vessel forms, the monochrome ware, and the other associated elements, support the Chavín claim. In Las Torrecitas and Guañape the Chavín contention is further strengthened by an early stratigraphic position. At Kotosh, the chronological and associational picture is not clear.

Cerro Sechín is another instance of a Chavín identification made largely upon the basis of the technological aspects of style—flat, line-carving on stone. Here, the architectural context supports an early dating, although the ceramic associations blur the picture. It is undoubtedly significant that there are no evidences whatsoever of either the Chavín style or the Chavín tradition as we have defined them in this analysis. Their absence at Las Torrecitas, Guañape, or Bellavista-Chilca might be due to limited archaeological sampling or to functional cause (small villages as opposed to important ceremonial sites); but their absence at Cerro Sechín, in the temple carvings, seems more likely to have a chronological explanation. As the Chavín or feline tradition, in one stylistic form or another, persists in a great many post-Chavín horizon cultures and periods, its non-appearance in an early culture would favor a pre-Chavín horizon position. The assumption here is that the feline representation in central Andean art began with Chavín, that, in effect, the Chavín tradition began with the first appearance of the Chavín style.

Other Peruvian or Andean sites or cultures where Chavín traditional, although not stylisic, influence may be seen are too numerous to be described in full here. Recuay, Mochica, and Gallinazo of Virú are example.

Bennett's[188] identification of a grave from the Gallinazo site group as Chavín was based upon the representational (cat figure on textile) and the technological (incised black ware) aspects of Chavín rather than the Chavín style itself. This grave dates from the latter part of the Gallinazo period and, as such, is considerably later than the Chavín horizon.

The distinctive, linear "Recuay cat" is a dominant motif in the Recuay painted

187 Tello, 1940, p. 680.
188 Bennett, 1939, p. 79, fig. 15a,b.

ceramic style. Its prototype for the feline idea may very well have been Chavín, but its style is its own.

An interesting utilization of the concept of the Chavín or feline tradition is Larco Hoyle's statement on Mochica religion:[189]

> Mochica religion centers around feline symbolism, and it seems reasonable to believe that in this period we have, with a new elaboration and sophistication of animal worship, a continuation of the old feline deity of the North Coast.

There is no claim here that this is Chavín, for Larco's treatment of the Chavín style is by horizon. It is, however, a realization of the traditional content of the style.

SUMMARY AND CONCLUSIONS

Chavín is the name given to a prehistoric art style of the north Peruvian area. The name derives from the highland site of Chavín de Huántar where the style is well represented.

Chavín style is manifested over a region bordered on the north by Piura (coast) and Pacopampa (highland) and on the south by Ancón (coast) and Chavín de Huántar (highland). In the highlands, it has been reported, but not described, from sites south of Chavín de Huántar. On the basis of present information, these are the geographical limits of the style.

The point of origin of the Chavín style is unknown, although it is likely that it was first developed within the geographical limits stated. Larco Hoyle is of the opinion that Chavín type art (Nepeña, as he would call it) developed on the coast, probably in the Nepeña Valley and spread from there to the highlands. Tello takes the counter-position, bringing it from highlands to coast. Tello's theories of origins are somewhat more complex than this as he postulates beginnings in the Amazonian forests to the east of the Andes. In following these theories he has offered similarities between the Chavín style and certain Amazonian ceramic styles as proof of Amazonian origins. These similarities have not been demonstrated to the general satisfaction of other investigators.

The chronological limits of the Chavín style fall early in the Peruvian sequences. Its terminal date in the relative scale is indicated, for the most part, by the inception of the White-on-red horizon periods. This is substantiated in several instances by stratigraphy. The lower limits of the Chavín style appear to be defined by an early pre-maize, semi-horticultural period; although this is much less securely tied down than the upper limit White-on-red horizon dating.

189 Larco Hoyle, 1946, p. 171.

In general classificatory terms, the Chavín style is placed on the Early Formative stage of Peruvian prehistory and given the estimated dates of 1000-0 BC.

In contrast to our above conclusions, there are claims that the Chavín style, or Chavín culture, was spread much more widely than the Peruvian north coast and highlands and that its chronological limits extend much later than the White-on-red horizon. Most of these claims have been advanced by the late Dr J. C. Tello. To test these claims it was first necessary to define just what was to be included under the term Chavín.

To begin with, we considered only the art style of Chavín, dropping for the time being all connotations of Chavín as a culture, a civilization, or an empire. The Chavín style was then defined as being identical to, or closely resembling, the designs of the stone carvings of the type site, Chavín de Huántar. For analysis, Chavín style was broken down into: (1) the technology of carving or incising; (2) representations of the feline, human, bird, serpent, and composites of these; and (3) the peculiar configuration of the representations as this is expressed in the curvilinear forms, massive heads, smaller intricately disposed heads, curved fangs, and other elements. This third aspect of the Chavín style was considered as its most unique quality and, therefore, diagnostic of the style.

With the stylistic pattern or configuration as an index of contemporaneity, seventeen sites or regions, including the type site, were determined as having Chavín style manifestations in stone, ceramics, bone, wood, textiles, metals, or in two or more of these. The other Chavín claims were examined and rejected on the basis of absence of evidence for this stylistic pattern. Of the seventeen sites or regions possessing the Chavín style, it was demonstrated that eight were similar in cultural context. This similarity of context is seen in various traits, but is best expressed in monochrome, dark, often polished pottery of simple forms, occasional stirrup-spout jars, and incised or surface-manipulated decoration. On the remaining eight sites, six are either isolated Chavín style finds or situations where there is only limited contextual data. For the final two sites or regions, adequate context is available, particularly in ceramics; but this context is notably different from that of the first eight sites with their dark-colored, monochrome, incised wares. One of the two is Mochica with its elaborately modelled and red-on-white pottery which, only rarely, bears a Chavín style incised and painted design. Stratigraphic and seriational data indicate Mochica to be later than the other sites or cultures linked by the Chavín style. The second of the two is Kuntur Wasi. Its pottery has more resemblance to the majority of Chavín style sites than does Mochica; nevertheless, it has features which link it with Salinar rather than Chavín. As Salinar is the time period intermediate

between Cupisnique (Coastal Chavín) and Mochica, it is suggested that Kuntur Wasi, or comparable sites of the sierra, served as a chronological conductive link to pass the Chavín style from Cupisnique to Mochica.

It can be concluded that Chavín style does, as has been supposed, assemble largely on a time horizon antecedent to the White-on-red styles and that on this horizon there is appreciable similarity of cultural context. On the north coast and in the adjacent highlands there are two instances of its continuation into later time periods: Kuntur Wasi and Mochica. At Kuntur Wasi Chavín style is a feature of stone sculpture and, possibly, although not certainly, of pottery; in Mochica it is only a very minor ingredient in ceramics. Thus, there is some substance to the claims of the chronological persistence of Chavín as a style. It should be noted, however, that these later persistences are not common and are extremely limited in a geographical sense.

What then of the many other Chavín claims? None of these have been verified from the standpoint of style. Their similarity to the Chavín style lies in their representations or in their technological aspects. The central representation of Chavín art is the feline being, presumably a deity. One of Tello's greatest contributions to Andean studies was to show the great geographical and chronological range of the feline as an art motif. These feline representations, although appearing in many distinct art styles and in different time periods, may reasonably be related as a *Chavín tradition*—a concept quite different from that of Chavín style. It is likely that this tradition of the feline originated in, or was introduced into, the central Andean area at the time of the Chavín style horizon. At least, it has not yet been found earlier. The feline is present in the styles of Chanapata, Pucara, Paracas Cavernas, and Tiahuanaco, to name only a few of those that have been identified as sites or cultures of a Chavín civilization. All of these lie outside of the geographical limits of the Chavín style as these have been plotted; and all are probably somewhat later in time than the Chavín style horizon.

A good many of the Chavín claims can be linked neither by style nor by the feline tradition. Here, it appears that the Chavín techniques of incising or carving have formed the basis of the Chavín identification. In many cases, such as Las Torrecitas, Guañape, the Bellavista-Chilca sites, and, possibly, Kotosh, these claims are partially supported by chronology and general cultural context. In other cases, the incision technique has been used to identify as Chavín or sub-Chavín a site or culture which is chronologically much later than and typologically at great variance with the Chavín horizon.

So far we have not touched upon the functional problem. What was the

nature of Chavín? Obviously, it was difficult to pose this question until there had been some segregation of the concepts bearing upon Chavín. If we consider only those sites which are linked together by the common possession of the Chavín art style, can we say that these form a Chavín culture or civilization? Some cultural uniformity exists, but there are important differences. It is as though a common cultural heritage of maize agriculture, a type of ceramics, carving and incising techniques, weaving, and the pattern of simple dwelling units in small villages were possessed or transmitted to the peoples of northern Peru. Coincident with this, or perhaps shortly afterward, regional specialization also appeared, so that some communities of the north coast constructed adobe pyramids, other north coastal groups worked in mud frescos, highland peoples developed the stone-faced platforms with interior galleries and impressive carving, and the villages of the central coast built no outstanding monuments. Metallurgy was advanced on the far north coast; in the Chicama Valley ceramics were most elaborate; and elsewhere there were other specializations. To visualize all of these as belonging to the same culture could, in the broader sense, be justified; but it should also be recognized that the unit is not comparable to other Peruvian archaeological cultures, such as the Mochica or Nazca. These last were certainly much tighter knit, more homogeneous entities than such a Chavín culture.

If there is some hesitancy in accepting Chavín as a culture, there is more agreement for another of Tello's concepts, that the Chavín culture possessed a common religious bond. This seems the best explanation for the phenomenon we have defined as the Chavín horizon style. Larco Hoyle[190] has dealt with this at some length, elaborating the idea that the feline cult spread among peoples who possessed a somewhat similar but regionally differentiated culture. Population size and distribution and the absence of evidence of organized militarism in Chavín horizon times have been proposed as conditions that would have made for the peaceful spread of such a religious cult.[191]

Accepting the spread of the Chavín style as the evidence of a rapidly diffused religious cult, what, then, is the significance of the Chavín or feline tradition as it occurs beyond the temporal and spatial limits of the style? To this question I submit the following hypotheses. First, the disappearance of an art style as mature and as integrated as Chavín must almost certainly have marked the dissolution or the radical transformation of the system which stood behind the symbol of the style. In sum, the particular religious cult of the Chavín style feline was destroyed or died. Second this cult was not immediately forgotten but

190 Larco Hoyle, 1941.
191 Willey, 1948.

persisted in Kuntur Wasi and Mochica where its emblems are found as minor parts of new stylistic assemblages or patterns. And, third, some of its central themes and beliefs were incorporated into chronologically later or geographically more remote religious systems as is attested by the traditional continuity of the feline being in the art styles of these systems.

Bibliography

Bennett, W. C.

1934 *Excavations at Tiahuanaco* (Anthropological Papers, American Museum of Natural History, vol. 34, pp. 359-494).

1936 *Excavations in Bolivia* (same series, vol. 35, pp. 329-507).

1939 *Archaeology of the North Coast of Peru* (same series, vol. 37, pp. 1-153).

1943 *The Position of Chavín in Andean Sequences* (Proceedings, American Philosophical Society, vol. 86, no. 2, pp. 323-327).

1944 *The North Highlands of Peru* (Anthropological Papers, American Museum of Natural History, vol. 39, pp. 1-114).

1946 "The Archaeology of the Central Andes" (in *Handbook of South American Indians,* J. H. Steward, ed., vol. 2, pp. 61-147, Bulletin, Bureau of American Ethnology, no. 143).

1948 *A Reappraisal of Peruvian Archaeology* (Memoirs, Society for American Archaeology, vol. 13, no. 4, part 2).

Bennett, W. C., and J. B. Bird

1949 *Andean Culture History* (Handbook Series, American Museum of Natural History, no. 15).

Bird, J. B.

1948 "Preceramic Cultures in Chicama and Virú" (in *A Reappraisal of Peruvian Archaeology,* W. C. Bennett, ed., Memoirs, Society for American Archaeology, vol. 13, no. 4, part 2, pp. 21-28).

Carrión Cachot, R.

1948 *La Cultura Chavín. Dos Nuevas Colonias: Kuntur Wasi y Ancón* (Revista, Museo Nacional de Antropologia y Arqueologia, vol. 2, no. 1, pp. 97-172, Lima).

Collier, D.

1948 "Peruvian Stylistic Influences in Ecuador" (in *A Reappraisal of Peruvian Archaeology,* W. C. Bennett, ed., Memoirs, Society for American Archaeology, vol. 13, no. 4, part 2, pp. 80-86).

Collier, Donald, and J. V. Murra

1943 *Survey and Excavations in Southern Ecuador* (Anthropological Series, Field Museum of Natural History, vol. 35).

Ford, J. A., and G. R. Willey

1949 *Surface Survey of the Virú Valley, Peru* (Anthropological Papers, American Museum of Natural History, vol. 43, part 1).

HOWARD, G. D.
1947 *Prehistoric Ceramic Styles of Lowland South America, their Distribution and History* (Yale University Publications in Anthropology, no. 37).

KIDDER II, ALFRED
1943 *Some Early Sites in the Northern Lake Titicaca Basin* (Papers, Peabody Museum, Harvard University, vol. 27, no. 1).

KROEBER, A. L.
1925 *The Uhle Pottery Collections from Moche. The Uhle Pottery Collections from Supe* (University of California Publications in American Archaeology and Ethnology, vol. 21, nos. 5 and 6).
1926a *Archaeological Explorations in Peru. Part I: Ancient Pottery from Trujillo* (Anthropology, Memoirs, Field Museum of Natural History, vol. 2, no. 1).
1926b *The Uhle Pottery Collections from Chancay* (University of California Publications in American Archaeology and Ethnology, vol. 21, no. 7).
1926c *Cultural Stratification in Peru* (American Antiquity, vol. 28, pp. 131-351).
1927 *Coast and Highland in Prehistoric Peru* (American Anthropologist, vol. 29, pp. 625-653).
1930 *Archaeological Explorations in Peru. Part II: The Northern Coast* (Anthropology, Memoirs, Field Museum of Natural History, vol. 2, no. 2).
1944 *Peruvian Archaeology in 1942* (Viking Fund Publications in Anthropology, no. 4).

LARCO HOYLE, R.
1938 *Los Mochicas* (vol. 1, Lima).
1941 *Los Cupisniques* (Lima).
1945 *Los Cupisniques* (Buenos Aires).
1946 "A Culture Sequence for the North Coast of Peru" (in *Handbook of the South American Indians,* J. H. Steward, ed., vol. 2, pp. 149-175, Bulletin, Bureau of American Ethnology, no. 143).

LOTHROP, S. K.
1941 *Gold Ornaments of Chavín Style from Chongoyape, Peru* (American Antiquity, vol. 6, pp. 250-262).
1951 *Gold Artifacts of Chavín Style* (American Antiquity, vol. 16, pp. 226-240).

MARQUEZ MIRANDA, F.
1946 "The Diaguita of Argentina" (in *Handbook of South American Indians,* J. H. Steward, ed., vol. 2, pp. 637-654, Bulletin, Bureau of American Ethnology, no. 143).

MEANS, P. A.
1931 *Ancient Civilizations of the Andes* (New York).

MIDDENDORF, E. W.
1893-95 *Peru* (3 vols., Berlin).

MILLIKEN, W. M.
1945 *Exhibition of the Art of the Americas* (Bulletin, Cleveland Museum of Art, 32nd year, no. 9).

NORDENSKIÖLD, E. VON
1913 *Urnengraber und Mounds in Bolivianischen Flachlande* (Baessler Archiv, vol. 3, pp. 205-255).

REICHLEN, H. and PAULE
1949 *Recherches archeologiques dans les Andes de Cajamarca: Premier Rapport de la Mission Ethnologique Française au Perou septentrional* (Journal, Société des Americanistes de Paris, vol. 38, pp. 137-174).

ROWE, J. H.
1944 *An Introduction to the Archaeology of Cuzco* (Papers, Peabody Museum, Harvard University, vol. 27, no. 2).
1950 Review of "Andean Culture History" by W. C. Bennett and J. B. Bird (American Antiquity, vol. 16, pp. 170-172).

STRONG, W. D.
1925 *The Uhle Pottery Collections from Ancon* (University of California Publications in American Archaeology and Ethnology, vol. 21, pp. 135-190).
1943 *Cross-Sections of New World Prehistory* (Smithsonian Miscellaneous Collections, vol. 104, no. 2).
1948 "Cultural Epochs and Refuse Heap Stratigraphy in Peruvian Archaeology" (in *A Reappraisal of Peruvian Archaeology*, W. C. Bennett, ed., Memoirs, Society for American Archaeology, vol. 13, no. 4, part 2, pp. 93-102).

STRONG, W. D., and J. M. CORBETT
1943 *A Ceramic Sequence at Pachacamac* (Columbia Studies in Archeology and Ethnology, vol. 1, no. 2).

STRONG, W. D., and G. R. WILLEY
1943 *Archeological Notes on the Central Coast* (Columbia Studies in Archeology and Ethnology, vol. 1, no. 1).

TELLO, J. C.
1922 *Introduccion a la Historia Antigua del Peru* (Lima).
1923 *Wira-Kocha* (Inca, vol. 1, pp. 93-320, 538-606).
1929 *Antiguo Peru, Primera Epoca* (Lima).
1930 *Andean Civilizations: Some Problems of Peruvian Archaeology* (Proceedings, International Congress of Americanists, 23rd Session, 1928, pp. 259-290, New York).
1937 *El Strombus en el Arte Chavín* (Lima).
1937-38 *Preliminary Report* [to Institute of Andean Research] (ms., Institute of Andean Research, New York).
1940 *Origen y Desarrollo de las Civilizaciones Prehistoricas Andinas* (Proceedings, International Congress of Americanists, 27th Session, 1939, vol. 1, pp. 589-720, Lima).

1943 *Discovery of the Chavín Culture in Peru* (American Antiquity, vol. 9, pp. 135-160).

UHLE, M.

1910 *Ueber die Frühkulturen in der Umgebung von Lima* (Proceedings, International Congress of Americanists, 16th Session, pp. 347-370, Vienna).

1913a *Die Ruinen von Moche* (Journal, Société des Americanists de Paris, vol. 10, pp. 95-117).

1913b *Die Muschelhügel von Ancon, Peru* (Proceedings, International Congress of Americanists, 18th Session, pp. 22-45, London).

1925 "Report on Explorations at Supe" (Appendix in A. L. Kroeber, *The Uhle Pottery Collections from Supe,* University of California Publications in American Archaeology and Ethnology, vol. 21, no. 6, pp. 257-263).

WILLEY, G. R.

1943 *Excavations in the Chancay Valley* (Columbia Studies in Archeology and Ethnology, vol. 1, no. 3).

1945 *Horizon Styles and Pottery Traditions in Peruvian Archaeology* (American Antiquity, vol. 11, pp. 49-56).

1948 "Functional Analysis of 'Horizon Styles' in Pervian Archaeology" (in *A Reappraisal of Peruvian Archaeology,* W. C. Bennet, ed., Memoirs, Society of American Archaeology, vol. 13, no. 4, part 2, pp. 8-15).

WILLEY, G. R., and J. M. CORBETT

n. d. *Early Ancon and Early Supe: Chavín Horizon Sites of the Central Peruvian Coast* (ms.).

PEABODY MUSEUM, HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS

ANTIQUITY OF THE PINEAPPLE IN AMERICA*

J. L. COLLINS

THE PINEAPPLE, *Ananas comosus* (L.) Merr., is one of an imposing array of native American economic plants cultivated and improved by the people of America during the development of their civilizations and cultures in pre-Columbian time.

The entire pineapple family, *Bromeliaceae,* is indigenous to America, with the exception of a single species, *Pitcairnia feliciana* (Aug. Chev.) Harms and Mildbr., which is native to the west coast of Africa. Of the five pineapple species, only *A. comosus* became an important food plant, although the fruits of two other species are sometimes eaten. *A. bracteatus* (Lindl.) Schultes has been cultivated on a small scale during the post-Columbian period. The Indians of the Gran Chaco of southern Paraguay still collect fruits of *Pseudananas sagina-rius* (Camara) Camargo. Fruits of species of the genus *Bromelia,* closely related to the pineapple, are also used by the people of Brazil and Paraguay. While these other species may have been used casually by the early American peoples, varieties of *A. comosus* were undoubtedly the most important as food items.

At the time of the discovery of the New World, in 1492, the Indians in tropical America had a number of named varieties of *A. comosus.* These were probably selected over many generations for large fruit size, good flavor, and absence of seeds.

The other species of pineapples still growing in a wild state in a number of places in tropical America all produce seeds; some are extremely prolific in seed production. *Ananas comosus,* which includes the domesticated pineapples of many varieties, does not produce seeds by self-fertilization, although its germ cells are normal and are capable of producing seeds after cross-fertilization with compatible varieties. Plants produced from such seeds do not reproduce either parent variety. Since these varieties are normally seedless they must be propa-gated by asexual means, using suckers, slips, and crowns. The absence of seeds in some vegetatively reproduced crops, such as pineapples, bananas, and grapes, has led some people to believe that long reproduction by asexual methods has brought about in some way the loss of the capacity for seed production in these

* Published with the approval of the Director as Miscellaneous Paper No. 49 of the Pineapple Research Institute of Hawaii, Honolulu, Hawaii.

varieties. Laufer,[1] in his excellent discussion of the migration of the pineapple to other tropical countries, appeared to give credence to this belief in regard to the pineapple. Macgowan,[2] in referring to the American Indian's accomplishments in agriculture, states that "through long cultivation he produced the seedless pineapple." There can be little doubt that the Indians purposely selected and propagated the seedless fruited plants. These fruits were much more agreeable to eat, since the pineapple seeds, about the size of a grain of rice, are extremely hard. Eating seedy pineapple fruit is like trying to eat a fruit mixed with small stones. In regard to the alleged effect of long-continued vegetative reproduction on seed production, we may call to mind other kinds of crops long propagated by asexual means which still produce seedy fruits (strawberries, blackberries, apples, plums). Anyone who may have had the experience of trying to eat any fruit containing small gravel (or a seedy pineapple) can readily appreciate the surprise and delight of the Indians when they first found a pineapple fruit without seeds.

The origin of seedlessness in the pineapple is more logically explained as due to a random genetic mutation which had the effect of preventing self-fertilization. Some genetic evidence that this could be the manner of origin of seedless pineapples is to be found in a mutation in commercial fields in Hawaii, which changed the seedless pineapple into a seed-producing type.[3] This could be considered a reversion to an ancestral seedy type.

While the seedless condition cannot be accepted as evidence of a long period of cultivation in pre-Columbian times, there are other kinds of evidence which do indicate the antiquity of the pineapple as a cultivated species.

Laufer[4] observed that the pineapple was so strikingly individualistic that it challenged the attention of travelers and explorers to the extent that they left records of its presence in many of the places where fortunes of travel landed them in the New World. It is largely due to this propensity of the early explorers and settlers that we can chart the distribution and use of the pineapple as a cultivated species, in the New World, so soon after its discovery.

The approximate areas where pineapples were reported by the early explorers and colonists are shown in Figure 1. These areas are mostly along the seacoast or on islands of the West Indies. This does not mean that they were not also

1 Berthold Laufer, *The American Plant Migration* (Scientific Monthly, vol. 28, pp. 239-261, 1929).

2 Kenneth Macgowan, *Early Man in the New World* (New York, 1950).

3 J. L. Collins, *Notes on the Origin, History and Genetic Nature of the Cayenne Pineapple* (Pacific Science, vol. 5, pp. 3-17, 1951).

4 Laufer, *The American Plant Migration.*

grown in inland regions, but only that the early explorers rarely penetrated very far inland during the first fifty to one hundred years, except in a few places.

The place of origin of the pineapple was probably inland and not coastal. While there will always be uncertainty regarding the area where the pineapple developed or originated, there are some botanical indications that this was in the interior of South America. This location was probably in the Paraná and Iguassu

FIG. 1. Map of tropical America, with shaded areas indicating regions where growing pineapples were observed by the early explorers and colonists at different times.

River valleys in the region now including Brazil, northern Argentina and Paraguay.[5]

From this origin it was carried to other tropical American regions by native tribes long before the time of Columbus.

The pineapple was first seen by Europeans on the island of Guadeloupe, in the Lesser Antilles, when Columbus and his sailors landed there in 1493 on the second voyage to the New World. Again in 1502, according to Irving,[6] Columbus found pineapples being cultivated along the coast of Panama at a

5 K. F. Baker and J. L. Collins, *Notes on the Distribution and Ecology of* Ananas *and* Pseudananas *in South America* (American Journal of Botany, vol. 26, pp. 627-702, 1939).

6 Washington Irving, *The Life and Voyages of Christopher Columbus* (New York, 1884), p. 527.

place he called Puerto Bello. The following account by Irving indicates a permanent Indian settlement:

> On the second of November the squadron anchored in a spacious and commodious harbor, where the vessels could approach close to the shore without danger. It was surrounded by an elevated country; open and cultivated with houses within a bowshot of each other, surrounded by fruit trees, groves of palms and fields producing maize, vegetables and the delicious pineapple, so that the whole neighborhood had the mingled appearance of orchard and garden. . . .

In 1503, while still exploring the coastal area of Panama, Columbus also found pineapples near the place he named Belen, some distance north of the present Panama Canal.

Pigafetta[7] was apparently the first to record this fruit growing on the mainland of South America, in the coastal area of Brazil, only twenty-six years after Columbus first saw them in Guadeloupe. De Oviedo,[8] a Spanish government agent who lived in the New World from 1513 to 1547, in commenting on the pineapple, stated, "In all these Islands it is a fruit which I hold old and very common because they are found in all these Islands and on Tierra Firme." "These Islands" refers to the West Indies, and "Tierre Firme" was the name applied to the mainland of Central and South America. De Oviedo briefly described three distinct varieties grown by the Indians of Haiti and gave the local names for them. He is also credited with producing the earliest known illustration of a pineapple fruit.[9] Christoval de Acuna found the Indians in the Amazon valley using pineapples as food in 1639, according to Laufer's record of pineapple migration.

Geronimo Benzoni, a native of Milan who lived in Mexico from 1541 to 1555,[10] described the pineapple plant without specifically stating that it grew in Mexico. On the other hand, Francisco Hernandez[11] states that he found pineapples in the warm regions of Mexico and produced a drawing of the fruit and plant, using the Aztec name Matzatli for it (Figure 2). This rather late reference to the pineapple in Mexico (1651) does not establish for a certainty that it was grown there before 1492.

The native peoples appear to have used the pineapple very little in their religious and cultural ceremonies, nor was it generally used as a motif for pottery

7 According to Laufer.

8 G. F. de Oviedo y Valdes, *Historia General y Natural de las Indias* (Seville, 1535).

9 J. L. Collins, *Pineapples in Ancient America* (Scientific Monthly, vol. 67, pp. 372-377, 1948).

10 According to Laufer.

11 *Rerum Medicarum Hispaniae Thesaurus* (Rome, 1651).

designs, temple ornaments or other decorations, as were corn and potatoes. There is one indication that the Indians of Mexico may have used the pineapple in their religious symbols. Acosta, in his History of the Indies,[12] refers to an Indian god, Vitziliputzli, which was described as holding in his left hand a white shield with five pineapples made of white feathers and set in the form of a cross. This image was probably used by the Indians before the coming of the Spanish to that area.

FIG. 2. An early illustration of a pineapple plant and fruit appearing in the book by Francisco Hernandez with the title, *Nova Plantarum Animalium et Mineralium Mexicanorum Historia 1651.* The name "Matzatli" is the Aztec name for pineapple.

One other mention of the possible use of pineapple as the decoration of a temple or shrine should be cited. Stephens[13] found what he thought might be intended for a pineapple fruit in front of an altar among the ancient ruins on the seacoast of Yucatan, at Tuloom. He published a drawing of this ornament,

12 José de Acosta, *Historia Natural y Moral de las Indias* (Mexico, 1940; reprint of the 1590 edition).

13 John Lloyd Stephens, *Incidents of Travel in Central America, Chiapas and Yucatan* (2 vols., New York, 1843), vol. 2, p. 406.

which suggests a pineapple without a crown, resting on a circular base. In this description he stated, "Near the foot of the steps overgrown with the scrubby wild palm . . . is a small altar with ornaments in stucco, one of which seems intended to represent a pineapple." However, Dr A. M. Tozzer, who made comprehensive studies of the culture of the pre-Columbian inhabitants of this part of Central America,[14] does not believe this stucco ornament was intended to represent the pineapple.

Tuloom is on the peninsula of Yucatan, and Dr J. Eric Thompson, in a letter to the author in 1946, stated that he considered the Maya of this peninsula did not have the pineapple in pre-Columbian times, but that the Maya of other Central American regions did have it at that time.

In 1565, Sir John Hawkins,[15] exploring the tropical American regions in his ship "Jesus of Lubeck," stopped at a place known as Santa Fe, on the coast of Venezuela, where he loaded provisions and water. He obtained from the Carib Indians, described as naked savages armed with poison arrows, "hennes, potatoes and pines." These latter were pineapples about the size of two fists, and "more delicious than any sweet apple sugared."

Sir Walter Raleigh,[16] who in 1595 made his remarkable expedition of exploration up the Orinoco River in northern South America, secured quantities of pineapples from the Indians at various points while ascending the river.

In 1637, Frans Post,[17] a Dutch artist, came to Brazil, where he painted many seaport, village, and countryside scenes portraying the country and people typical of Brazil at that time. Many of these paintings show pineapple plants as a part of the vegetation in and around the villages. None of these seen by the writer can be considered as evidence of cultivation, but they do serve to show that pineapples were a common component of the vegetation in those regions of habitation at that time.

These records left by explorers and travelers show that pineapples were widely distributed throughout tropical America at or soon after 1492. These records, however, cover a period of up to about 150 years after the discovery of America. Some of these cannot be taken as unquestioned evidence of the presence of pineapples in some areas in pre-Columbian times. On the other hand, it is not known whether there was sufficient trade and communication to trans-

14 Personal communication.

15 W. E. Stafford, *The Potato of Romance and of Reality* (Journal of Heredity, vol. 16, pp. 113-126, 1925).

16 Sir Walter Raleigh, "The Discovery of Guiana" (in *The Harvard Classics*, Charles W. Eliot, ed., 50 vols., New York, 1909-10), vol. 33.

17 Frans Post, *Seus Quadros Brasileiros* (Rio de Janeiro, 1937).

port pineapples between the Indians of those regions, like Panama, where they were known to be cultivated before 1492, and those later reported regions such as the Orinoco River valley and Post's record in eastern Brazil.

There appear to be no early records of the pineapple being found on the Pacific slope of South America. Acosta[18] states that it was not known in Peru before the Spanish came, but was subsequently introduced from other areas. However, Cook,[19] in discussing the native economic plants of Peru, indicates that it was a cultivated plant in pre-Spanish times and gives the Quichua or Inca name of Achupalla for it in a list of native Peruvian plants.

Although the pineapple family is indigenous in the New World (except one species), there are three puzzling literature references suggesting that the pineapple may have been known to the ancient peoples of the Old World.

Assyrian Fruits. (From the Monuments.)

FIG. 3. On the left is shown the object which was supposed by two writers to represent a pineapple in the ancient country of Assyria. Present-day evidence is all against this possibility.

Layard[20] and Rawlinson[21] both describe some stone carvings on the walls of the ancient Assyrian city of Ninevah depicting the different kinds of foods served at a banquet. One illustration was thought by both authors to represent a pineapple fruit. Rawlinson stated, "The representation is so exact that I can scarcely doubt the pineapple being intended." However, Layard expressed some doubt about the Assyrians being acquainted with the pineapple, but at the same time insisted that "the leaves sprouting from the top proved that it was not the cone of a pine tree or fir."

The figure shown by Rawlinson, reproduced here as Figure 3, does have some general resemblance to a pineapple fruit.

---

18 Acosta, *Historia Natural y Moral de las Indias.*

19 O. F. Cook, *Peru as a Center of Domestication* (Journal of Heredity, vol. 16, pp. 33-34, 95-110, 1925).

20 Austin H. Layard, *Discoveries among the Ruins of Nineveh and Babylon* (New York, 1853), p. 289.

21 George Rawlinson, *The Five Great Monarchies of the Ancient Eastern World* (3 vols., New York, 1881), vol. 1, p. 578.

The third reference suggesting the presence of the pineapple in the ancient civilizations of the Old World is supplied by Wilkinson,[22] who states, "Among the numerous products of India met with in [ancient] Egypt which tend to prove an intercourse with that country may be mentioned the pineapple, models of which are found in the tombs of glazed pottery. One is in the possession of Sir Richard Westmacott." Wilkinson appears to believe that the pineapple was a product of India. However, there is no evidence that it was known in India or Asia during that period. Marco Polo, who travelled through India and Asia centuries later, and who described with considerable accuracy many of the products and customs of those countries, makes no mention of pineapples.

The pineapple plant is so well constituted for survival by its vegetative method of reproduction and the ability of the vegetative shoots to remain viable for many months out of the soil in a dry condition, that it is very improbable that it would have disappeared completely from these countries, had it existed there. The fact that it was not handed down through successive civilizations in the Old World, along with wheat, dates, pomegranates, and melons, and that it was maintained through centuries in the New World, seems to be sufficient evidence that it had never existed in these ancient Old World civilizations.

The records of exploration seem to establish without much doubt that the pineapple was well distributed throughout tropical America previous to the discovery and that it was cultivated in some regions.

Further evidence for a long time association of the pineapple with the native people is derived from their medicinal knowledge and use of the fruit and plant. Such knowledge could only be developed by long experience, probably extending back through many human generations.

De Oviedo,[23] in discussing the pineapple about twenty-seven years after its discovery, said, "I do know that it rouses the appetite. There are many people who do not care for food. It restores a healthy appetite and stimulates them to eat." Father André Theret (according to Laufer), writing of the New World in 1558, remarked, "The fruit of which the natives make the greatest medicinal use is called the nana."[24]

Nicholas Monardes,[25] a physician of Seville about 1577, also states that the

22 J. Gardner Wilkinson, *Manners and Customs of the Ancient Egyptians* (3 vols., London, 1837), series 1, vol. 3, p. 189.

23 De Oviedo, *Historia General y Natural de las Indias.*

24 "Nana" is the name given the pineapple by some tribes in South America.

25 The Monardes statement appears in *Joyfull Newes out of the Newe Founde Worlde/* Written in Spanish by Nicholas Monardes, Physician of Seville and Englished by John Frampton, Merchant, Anno 1577, with an introduction by Stephen Gaselee (vol. 2, London and New York, 1925).

pineapple restores the appetite and that it is good for stomach disorders and for the heart. Piso[26] is credited with the statement that it is a great cordial to fainting spirits and helps a squeamish stomach. Similar statements are found in other early discussions of the pineapple. Some of these, of course, may have been copied from the earlier writers. However, these earlier writers, like de Oviedo, could hardly have had sufficient time to learn these things from personal experience, and Theret gives credit to the Indians for the information.

The two virtues most often mentioned are the stimulation of the appetite and alleviation of gastric disorders. Modern studies have given some substance to these two virtues discovered by the Indians. Recent nutritional studies conducted by a university in the United States[27] demonstrated that white rats, given a balanced diet which included a small amount of pineapple, ate more food than a similar group on the same diet but lacking the pineapple ingredient. The pineapple diet stimulated their appetite with the result that they ate more food.

Other studies[28] have shown that the pineapple fruit and plant contain the protein-splitting enzyme, bromelin, which has the ability to digest protein material. Wingrove,[29] an English physician, confirmed the value of the pineapple as an aid to digestion and stated that "to obtain its full digestive value, one quadrant of a moderately (say half an inch) thick slice is ample for one meal."

The Indians in several regions had also learned the art of wine making from these fruits. Columbus[30] mentioned wine being made by the Indians at Veragua, on the coast of Panama, at the time of his visit there in 1503. De Oviedo, in his dissertation on the pineapple, said that, "On the Tierre Firme in some parts the Indians make wine from these pines and it is considered wholesome. I have drunk some of it and it is not very much like real wine for the great part because it is too sweet." Raleigh[31] also mentions wine being made by the Indians in the Orinoco River valley.

The art of wine making was probably acquired before they learned of the medicinal virtues mentioned above. To produce fermented beverage from a pineapple fruit does not necessarily require a long association with it, if we may

26 Sloan's *Natural History of Jamaica* (London, 1707).

27 Unpublished.

28 A. K. Balls, R. R. Thompson, and M. W. Kies, *Bromelin and its Commercial Production* (Industrial and Engineering Chemistry, vol. 33, p. 950, 1941).

29 Wyatt Wingrove, *The Pineapple as a Digestive Aid* (The Lancet, vol. 1, p. 1859, 1902).

30 Irving, *The Life and Voyages of Christopher Columbus*, p. 538.

31 Raleigh, *The Discovery of Guiana*.

judge from the exploits of the GIs who were assigned to small military stations in or adjacent to pineapple fields in Hawaii during World War II. They promptly learned to produce a fermented drink from pineapples, yet most of them had never seen growing pineapples before they reached Hawaii.

Still another source of evidence for the possible antiquity of the cultivated pineapple in America is to be found in the degree of genetic variability in a single pineapple variety. We have already mentioned that most of the cultivated varieties of pineapple are seedless and are consequently propagated by asexual methods, using slips, suckers, and crowns.

In this method of propagation, progeny plants are exact duplicates of the parent plant, and there is no opportunity for genetic segregation of hereditary characters such as can occur during reproduction (sexual) from seeds. Hybrid plants propagated asexually maintain their hybrid characters through many successive plant generations. The only source of genetic variation in an asexually reproduced variety is somatic mutation. The rate at which such mutations occur is usually extremely slow; otherwise varieties could not continue true to their variety characteristics over many generations. That many horticultural plant varieties have been continued for a long time is itself valid evidence of the generally very low rate of mutation. Very rarely, new or altered characters do appear in such varieties. Once a mutation appears in a single plant of a variety, that plant will thereafter reproduce the mutant character in its asexual progeny. When the new character is only a slight alteration, or involves a non-essential character (from the viewpoint of plant vigor and horticultural value), then the mutant type may become established in the variety. On the other hand, should the new character be in conflict with essential characters of the variety, or with the environment, or both, then the mutant type might become extinct.

Even though the rate of somatic mutation is generally extremely slow, the combination of a long period of time and a large number of asexually produced plants provide opportunity for such mutations to become established within a variety. Thus the number of hereditary variations present in an asexually propagated variety may be used as a rough measure of the age of that variety.

Pedigree studies in the Cayenne variety of *Ananas comosus* have shown that it contains a large number of mutations.[32] Some of these mutations differ so slightly from the mean for the variety that only by refined methods of study can they be identified. Dated records for this variety go back only to 1841. Whether or not the 110 years of its known age has been time enough for the accumulation of the genetic diversity it now has cannot at present be determined.

32 Collins, *Notes on the Origin, History and Genetic Nature of the Cayenne Pineapple.*

However, Collins[33] has shown that this variety may have been grown by the Indians in the northern part of South America for a long time previous to its appearance in France sometime before 1840. The presence of a large number of somatic mutations in the Cayenne variety therefore lends support to the hypothesis that this variety may have been developed in pre-Columbian times.

Cook[34] believes that the biological evidence derived from a study of the indigenous food plants of America indicates a great antiquity for agriculture in America. He stated that

> such evidence comes from comparing the cultivated species with their nearest wild relatives. Such comparisons in America show wide divergence, so wide, in fact, that it has not been possible to identify with certainty the wild type of several of the most important species as corn, tobacco, beans, peanuts, potatoes and tomatoes.

This kind of reasoning for the antiquity of cultivated plants in America can be applied as well to the pineapple. *Ananas comosus* is considered as a cultigen—being known only as a cultivated species without recognizable ancestral types. Other species of *Ananas* already mentioned grow wild in parts of South America, as they probably have for thousands of years. Some of the varieties of *comosus* are to be found growing in uncultivated areas, but are considered to be plants which have survived from abandoned cultivated places, or have escaped from cultivation. This species includes an unknown number of varieties, exhibiting differences in many characters. This multiplicity of varieties also indicates an old species.

Using a botanical time scale, Ames[35] compares the postulated age of the economic annual plants of America with that assigned to the economic annuals of the Old World, and concludes that the American cultivated species go back as far into human history as do the important food plants of the Old World.

The biological and historical records of the pineapple parallel to a marked degree the records of these other economic plants of America, and therefore the pineapple shares with them the distinction of having been developed and domesticated by the ancient peoples of America.

Pineapple Research Institute of Hawaii
Honolulu, Hawaii

33 *Ibid.*

34 Cook, *Peru as a Center of Domestication.*

35 Oakes Ames, *Economic Annuals and Human Cultures* (Botanical Museum of Harvard University, Cambridge, 1939).

CEREMONIAL EXCHANGE IN WESTERN ARNHEM LAND

RONALD M. BERNDT

I

AUSTRALIAN ABORIGINAL economy, trade, and ceremonial exchange of goods have received a certain amount of attention from anthropological[1] and other writers. Up to the present, however, no separate and detailed study has yet appeared in this field.[2] This article, then, is a contribution in the former category, an addition to an ever-growing accumulation of data on this aspect of Aboriginal life: for nearly all studies relating to the Aborigines contain some direct or indirect reference to their economic organization and behavior.[3]

This paper describes and discusses, very briefly, six ceremonies at which natives from different tribal groups meet together for the sole purpose of exchanging goods. The exchange is accompanied by spectacular dancing, ritual, and singing, and regarded as a festive occasion. We may thus legitimately call it a "ceremonial exchange," for the goods themselves are an integral part of this manifestation.

The term "ceremonial exchange" has, from time to time in Australia, been loosely used, and in order to make our point clear we shall refer to Dr Thomson's book. Dr Thomson did not fulfill the promise of his central theme, "ceremonial economics," and presented no data to justify his title. The area with which he deals (northeastern and north-central Arnhem Land)[4] adjoins that

---

1 No attempt is made here to enumerate all writers and their work in relation to this subject. The most important are, however: Warner, 1937, *passim;* Elkin, 1938, pp. 14-16, 126, *passim;* Kaberry, 1939, pp. 1-36, *passim;* Stanner, 1933-34, pp. 156-175, 458-471; Basedow, 1925, pp. 100-152; McCarthy, 1939.

2 One book relating to economic life in Arnhem Land has recently been published (Thomson, 1949, pp. 1-106). It is not, however, a detailed study of the subject. Fifteen years ago, Dr Thomson's book might have been less critically received. Today, however, our knowledge of the Arnhem Land groups is increasing, and we are in a position to speak with more authority on their culture, social organization, and life. We look now for more detailed and accurate studies, for the coördination of various aspects of their life, and for something more than a hasty and superficial sketch which contributes little of value to the serious student of Australian Aboriginal affairs.

3 There is not a complete absence of information on this subject, as Dr Thomson (1949, pp. 1-2) suggests.

4 The present writer, with his wife, carried out field work in that region in 1946-47 and in 1950, and has made a detailed study of its economic and ceremonial life, which will be discussed later.

to be discussed here. Trade exchange does, indeed, exist there, and has an extremely important place in the life of the people; but it is not patterned in the same way as the *kula* of the Trobriands,[5] or the *merbok* and *kue* exchange of the Daly River, Northern Australia.[6] Because certain articles are exchanged at ceremonial times, this does not warrant our calling the "exchange" itself ceremonial. If exchange of goods is accompanied by ceremony and ritual, it may then legitimately be termed a "ceremonial exchange system": for in that case, the goods themselves and their exchange will provide the central theme. When, however, as normally in northeastern Arnhem Land, ceremonies are held during which exchange takes place incidentally to the main ritual (that is, the ceremony is not dependent on the economic exchange, but remains paramount),[7] then the exchange of goods is subsidiary to the ceremonial configuration. This distinction is important to the student of Aboriginal culture, in understanding the basis of indigenous economic life.

In northeastern and north-central Arnhem Land, then, the economic exchange is nearly always subordinated to the ritual and ceremonial significance. In western Arnhem Land, on the other hand, are various ceremonies which depend on economic exchange, the goods themselves representing an integral part of the ceremonies. Not all goods are of purely utilitarian value, although the majority may fall into this category. These ceremonies of western Arnhem Land express a form of ceremonial exchange which differs from that discussed by Dr Stanner for the Mullukmulluk, where there is an "apparent absence of ceremonial."[8]

5 Malinowski, 1922, definition of *kula*, pp. 81-84.

6 Stanner, 1933-34; also Berndt, unpublished field notes, 1945-46. *Merbok* is a complex system of delayed economic exchanges between individuals in the same or in different tribes. *Merbok* is more than merely an economic exchange on a utilitarian basis: it has a specific, though latent, "ceremonial" content (*vide* Stanner, 1933-34, p. 157). The other form of institution referred to here is called the *kue*. This is a ceremonial exchange with a sacramental and legal function in marriage. Both the *merbok* and *kue* are found on the Daly River and among associated tribes there.

7 Much of what might be legitimately designated "ceremonial economics" in northeastern and north-central Arnhem Land, involving the exchange of goods, having both material and prestige value, has been ignored or omitted by Dr Thomson. For example, there is the involved series of exchanges and gifts occurring at various points of the *ngurlmag* ceremonies (*vide* Warner, 1937, pp. 311-329); the ceremonial obligations and craft-specialization found in the *kunapipi* (*vide* Warner, 1937, pp. 290-311, and R. Berndt, *Kunapipi*) and *dyunggawon* (*vide* Warner, 1937, pp. 259-290), as well as in the *dua* and *jiritja* moiety *nara* rituals (*vide* Warner, 1937, pp. 335-370, and R. Berndt, *Djanggawul*); the preparation and eating of sacramental cycad bread and sacred food; the painting of sacred clan or totemic designs (*vide* Elkin, R. and C. Berndt, 1950, *passim*) and the obligations resulting therefrom: all these, and many other aspects, receive no attention in Dr Thomson's book. In all the above cases, however, the ritual content is uppermost, and the economic aspect subsidiary.

8 Stanner, 1933-34, vol. 4, no. 2, p. 157.

There are no specific *merbok* expeditions from one tribe to another. *Merbok* goes on in the shadow of more impressive events—inter-tribal gatherings for initiation, communal food-gathering, or various ceremonial activities; the *merbok* partners meet incidentally.[9] In western Arnhem Land, however, the tribal groups may meet for the sole purpose of the ceremonies and their exchange of goods; unlike the Mullukmulluk, the western Arnhem Landers have no defined individual partners in exchange, although that manifestation is apparent in northeastern and north-central Arnhem Land. In the *kue* of the Mullukmulluk, a complex organization associated with marriage, goods or "valuables" are handed over by simple presentation.[10] Without discussing in detail the apparent differences, we can at least state that the structuring of the western Arnhem Land ceremonial exchange does vary both from that of the Mullukmulluk[11] and from the economic exchanges of eastern Arnhem Land.

The area under consideration here then, is western Arnhem Land, Northern Territory of Australia;[12] and the principal informants involved were Gunwinggu, belonging to a powerful tribal group which has within recent years drifted in to Oenpelli, on the western fringe of the large Aboriginal Reserve. The local people are now almost extinct, so that the Gunwinggu have virtually "taken over" this region. These Gunwinggu belong to the western cultural and linguistic bloc, extending from about Cape Stewart in north-central Arnhem Land to the edge of the "buffalo plains" country. There has been in the past, and still is, considerable movement of other tribes in addition to the Gunwinggu, the present drift being mainly towards Darwin and the North-South Road. The ceremonies to be discussed, however, are treated from the viewpoint of the Gunwinggu, and not from that of tribes which come into association with them for the purpose of ceremonial exchange.

The economic structure of western Arnhem Land society conforms to the "normal" Aboriginal Australian pattern, based primarily on local availability of

---

9 *Idem*, p. 160.

10 *Idem*, vol. 4, no. 4, pp. 458-571.

11 The writer, with his wife, carried out field work in the Daly River region with remnants of Mullukmulluk and allied tribal groups in 1945-46. It is intended later to discuss their economic structure in some detail, elaborating and amplifying the points discussed by Dr Stanner (1933-34).

12 The tribal distribution and cultural structure of western Arnhem Land has been discussed in R. and C. Berndt, *Sexual Behaviour in Western Arnhem Land*. Field work in this region was carried out by my wife and myself in 1947 and in 1949-50. The former work was under the Australian National Research Council, the latter under the Research Committee of the Sydney University (also responsible for writing-up grants), and both in conjunction with the Department of Anthropology, University of Sydney.

certain foods and game, climatic conditions, seasonal fluctuations, and food-collecting, hunting and fishing activities. Food is more abundant in the northern coastal parts of the Northern Territory than in the center of the continent, and this is reflected to some extent in the physical appearance of the Aborigines. The western Arnhem Landers are semi-nomadic, setting up temporary camps according to the season and the resources of a particular locality. In both west and east Arnhem Land, much more emphasis is placed on what may be loosely termed material values than in many other areas of Aboriginal Australia.[13] This is an important feature requiring careful and detailed treatment, reflected as it is not only in the everyday behavior of the people, but also in their religious patterns and dream life. This stress on material values has been considerably increased by alien contact[14]—first with Malays and Macassans, and later with Japanese and Europeans.[15]

The preparation, presentation, and sacramental eating of food is an integral part of many sacred ceremonies, mourning rituals, and secular festivities, although subsidiary to the ritual content. It involves a complex network of obligations, comprising individual and collective responsibilities. Moreover, the basis of Aboriginal religion in both western and eastern Arnhem Land is a Fertility Mother, who is directly responsible for the seasonal fluctuations, the increase of the natural species, and the growing of all vegetable and plant matter, and thus for the maintenance of tribal continuity. Nevertheless, the collection, preparation, and distribution of food comprise only one aspect of western Arnhem Land economic life. There are also (for instance) organized trading of material objects, both within and beyond the local group; the fulfilment of kinship obligations, marriage contracts, and indemnities for certain offences; craft-specialization, and bartering of required implements, utensils, and so on; and the economic transactions resulting from pre- and extra-marital liaisons. All these involve only simple presentation, and cannot be described in any sense as "ceremonial." They are merely non-ritualized expressions of an economic structure which usually works so smoothly, and is taken so much for granted by the people themselves, that no excitement nor emotional tension is manifested collectively by the group, although it may be experienced by the persons immediately concerned in the transaction. There is here no excuse for group expression in the form of ceremony.

13 For example, in central-western region of the Northern Territory (Berndt, field work, 1944-46), or at Ooldea, northwestern South Australia (Berndt, field work, 1939, 1941).

14 Warner, 1937, pp. 451-468; Thomson, 1949, pp. 82-94.

15 *Vide* R. and C. Berndt, 1949, pp. 213-222; R. and C. Berndt, 1947; R. Berndt, 1948, pp. 93-103; R. and C. Berndt, *Arnhem Land, Its History and Its People;* and R. and C. Berndt, *Sexual Behaviour in Western Arnhem Land.*

In other cases, when economic elements appear in the great religious or mourning rituals, they are regarded as being, despite their importance, essentially secondary to the main theme. None of these aspects, however, can be discussed in detail here.

II

The western Arnhem Landers in the past, although only rarely today, were accustomed to performing six different trading ceremonies: *ʤamalag, rɔm, midʒan, wurbu, mamɔ:ruŋ* and *njalaidj*. Each was associated with a specific group of people, who travelled to a place outside their own territory for the purpose of exchanging material objects, and holding simultaneously a relevant ceremony. Except for the *ʤamalag*, each was associated with a specific tribe or group of tribes (see Fig. 1)). The *rɔm* was held for people coming from the Margulidjban-Gunwinggu territory about the Liverpool River; the *midʒan* for the Gunbalang (Walang), Gunavidji and Nagara coastal tribes; the *wurbu* for those from Cape Don, Port Essington, and Croker Island, comprising chiefly Jiwadja and Margu; the *mamɔ:ruŋ* for those from the Djawun and Gundjeibmi tribes; and the *njalaidj* for people belonging to the Dangbun and Jangman tribes. These represented some of the main tribal groups surrounding the Oenpelli and Gumader Gunwinggu, and belonging respectively to the east, the northeast and north, the northwest and west, the southwest, and still farther southwest. The *ʤamalag* has within recent years come to be associated with people from the east (generally speaking) or from the north (that is, in the vicinity of Goulburn Islands), but was originally introduced from the southwest.

1. *The Dʒamalag*. This is perhaps the most interesting, being a ritual which may be held today whenever "strangers" visit the camps at Oenpelli (or Goulburn Islands). It not only provides an excuse for the economic exchange of goods, but also offers an emotional outlet in the shape of sexual license.[16] The term *ʤamalag* may be used to describe a specific ceremony correlated with special forms of conventional behavior, but it has also a wider application. The "giving" of *ʤamalag* may accompany any secular ceremony. For instance, a visiting group from the east may bring to Oenpelli the *ʤadbaŋari* dancing and songs (of culture contact significance, from north-central and northeastern Arnhem Land). During the course of the dancing the onlookers (mainly Gunwinggu) may be so much impressed by the performance of one actor that they will "give *ʤamalag*" —valuables of all sorts, ranging from food and indigenous items to articles of European origin. These will be heaped up before the dancer, to be distributed later

16 The sexual content of the *ʤamalag* has been discussed in R. and C. Berndt, *Sexual Behaviour in Western Arnhem Land. Vide* Harney and Elkin, 1949, pp. 159-161.

among the visitors. No immediate return is expected, but later on the Gunwinggu will hold a ceremony at which the visiting group will be expected to "go *ʤamalag*" for them. The term *ʤamalag* may be used, in this sense, in other trade ceremonies mentioned above.

Although the *ʤamalag* has thus a certain general application, it may still be a definite ceremony. The pattern is as follows:

A party of visitors from (for instance) the east arrives at Oenpelli. After some preliminary discussion, accompanied perhaps by the sending of special feathered message sticks, it is decided to hold a *ʤamalag*. All collect on the dancing ground in the main camp, where two singing men of the visiting group commence special *ʤamalag* songs, or a certain "Gossip" song cycle[17] which is mainly of erotic content; at the same time, a third man blows the hollow wooden instrument known as the drone pipe or *didjeridu*. Men and women rise and begin to dance. The *ʤamalag* opens when two Gunwinggu women of the opposite moiety to the singing men "give *ʤamalag*" to the latter. They present each man with a piece of cloth, and hit or touch him, pulling him down on the ground, calling him a *ʤamalag* husband, and joking with him in an erotic vein. Then another woman of the opposite moiety to the drone pipe player gives him cloth, hits and jokes with him.

This sets in motion the *ʤamalag* exchange. Men from the visiting group sit quietly while women of the opposite moiety come over and give them cloth, hit them, and invite them to copulate; they take any liberty they choose with the men, amid amusement and applause, while the singing and dancing continue. Women try to undo the men's loin coverings or touch their penes, and to drag them from the "ring place" for coitus. The men go with their *ʤamalag* partners, with a show of reluctance, to copulate among the bushes away from the fires which light up the dancers. They may give the women tobacco or beads. When the women return, they give part of this tobacco to their own husbands, who have encouraged them to go *ʤamalag*. The husbands, in turn, use the tobacco to pay their own female *ʤamalag* partners, when they have been invited for coitus.

Then a Gunwinggu man may rise and give a blanket to a dancing woman of his opposite moiety, hitting her at the same time, and inviting her to have coitus. In these ceremonies the women normally wear nothing, or only a loin covering; the *ʤamalag* partner may pull this away, and seizing her arm, pull

17 *Vide* R. and C. Berndt, *Sexual Behaviour in Western Arnhem Land*, and "Erotic Stimulation in Western Arnhem Land Songs."

her into the nearby darkness. Or a Gunwinggu man may give his partner beads or tobacco, and she will hit him in turn.

There is much use of moiety and subsection terms. Several men or women belonging to one subsection may call out, "It's our turn now to hit those of the opposite moiety or subsection." Thus, singly or in groups, partners are chosen, goods presented, and coitus consummated, to the accompaniment of dancing and singing. Husbands urge their wives to "go *ʤamalag*," "not to be shy," not to shame them before the spectators and the visitors, for it is a matter of prestige that all should express their goodwill. Other singing men and another drone pipe player continue with different song cycles, and the same behavior is recommenced; most able-bodied adults are active participants, some men and women having more than one *ʤamalag* partner during the course of the evening. When all have had their turn, the Gunwinggu women giving cloth to the visitors, and the men their tobacco, beads, and blankets, the women (who have all been dancing) stand in two rows, according to their moiety. Then visiting men of one moiety dance towards the women of the opposite moiety, in order to "give them *ʤamalag*." They hold shovel-nosed spears poised, pretending to spear the women, but instead hit them with the flat blades. "We will not spear you, for we have already speared you with our penes." They present the spears to the women. Then visiting men of the other moiety go through the same actions with women of their opposite moiety, giving them spears with serrated points. This terminates the ceremony, which is followed by a large distribution of food from the local people.

The Gunwinggu have thus received, through the agency of their womenfolk, the much-prized and serrated spears, and in exchange have given articles of European origin (in pre-contact days, goods of indigenous manufacture, such as baskets, twine, ochres, etc.). The giving and receipt have been accompanied by much enjoyment, with singing and dancing and erotic behavior. The ceremony has served not only as an avenue for the exchange of desired commodities, but as an emotional outlet, and has supplied a means of consolidating friendly relations between members of different tribes. Although within recent years the erotic content of the *ʤamalag* has been intensified, the exchange of goods is still of considerable importance.

2. *The Rɔm*. The ceremony of this name begins when a Margulidjban-Gunwinggu man from the Liverpool River area visits the Gumader-Gunwinggu, whose territory stretches toward the coast. He sings special *rɔm* songs, while the local people "clap hands" or rhythmically beat time to his music; later he discusses with them the possibility of holding a *rɔm*. When a decision has been made, certain men of the Gumader side commence to make two emblems: one a crane,

made by members of the *jiritja* moiety,[18] and the other a brolga (a bird, also called native companion), made by those of the *dua* moiety.[19] These emblems, made from bound grass or wood, beautifully decorated with feathered pendants and painted with colored ochres, may be in either realistic or conventionalized form. When completed they are handed over to the visitor; he returns with them to his own country on the Liverpool River, where they are regarded as invitations to the *rɔm* trading ceremony. The recipients admire them, hold a ceremony, and dance with them, so indicating their readiness to attend the *rɔm*. They may not, however, come at once. A year or so may elapse before they are ready, and have collected together the objects with which they wish to trade; in the meantime, the sight of these *rɔm* emblems reminds them of their obligations. When finally ready, they leave their home camp and move from place to place collecting people to accompany them, until they are only a short distance from Gumader, or from the people who have sent the emblems. A messenger then approaches the latter, the *rɔm* sponsors, to advise that the visitors are at hand, and to find out "what way they are to dance." (This means that the *rɔm* dancing is discussed, together with the relevant song cycles.) The Gumader group prepare the dancing ground, and women clear away the grass. The visitor then returns to his group, who have approached nearer. Late one afternoon, they move towards the Gumader camp. A messenger again comes in with news of this, adding that all are painted and ready.

The Gumader people sit down in the cleared dancing place and await the appearance of the visitors, who are heralded by the sound of singing. First the singing men and the drone pipe player come on to the ground, followed by a long line of dancing men and women. They have hidden their trading goods, and the men carry only spears with which they dance. First they dance the billabong[20] and flowing flood waters; then the women dance from side to side across the ground, with the men in between. The man (or men) who made the *rɔm* emblem (or emblems) sits with his wives, children, and near relatives in the middle of the dancing ground, together with the singing men and the drone pipe player. After the dancing is finished, all retire for sleep. Day after day, in the early morning and late afternoon into the night, the same singing and dancing continue, until,

18 The eastern Arnhem Land moiety terms are used here. The *jiritja* moiety and its counterpart the *dua* have been introduced into western Arnhem Land for ceremonial reasons, for they are of patrilineal descent, while the indigenous moieties of western Arnhem Land are of matrilineal descent. *Vide* Elkin, 1950, pp. 5-14, and Elkin and R. and C. Berndt, *Social Organization of Western Arnhem Land*.

19 The opposite moiety: eastern Arnhem Land variant.

20 A billabong is a branch of a river that, instead of returning to the main stream, comes to a dead end and spreads to form a comparatively shallow "lake." During the wet monsoonal season, in the northern coastal areas these overflow and spread across the country.

after about ten days have passed, the trading objects are displayed. The Gumader group spread out on sheets of bark food of various kinds, wild honey, yams, nuts, lily roots and so on, with woven pandanus and net baskets, twine, ochres, fishing spears, beating sticks, clubs, fly whisks and the like. The visitors remove from hiding their prepared food, baskets, spears, spearthrowers, feathered string, stone knives and other articles, and spread them on the ground. (To-day, blankets, cloth, knives, and iron axes are substitued.)

The man (or men) who originally sent the *rɔm* emblem (or emblems) is the leader. At about sunset he instructs the Gumader people (men, women, and children) to paint themselves all over; then they assemble on the dancing ground.

Women from the Liverpool River group, first *jiritja* and then *dua,* dance forward with a barramundi fish emblem (made by men), which they place before the *rɔm* leader. Other dances follow, one after another, throughout the night. In the meantime, the Liverpool men retire to the tall grass to paint themselves for the culminating dance. Fires are replenished, and as the morning star is waning they dance out bearing a pole about twenty feet long, bound with jungle string from which hang many feathered pendants. This is the *rɔm* pole, signifying a billabong.

From the opposite direction another group dances out with the emu *rɔm* emblem, crossing the ground and dancing before the *rɔm* leader. Women dance from side to side across the ground, while other women from both groups rush about rearranging the food and trade objects.

The men move back in their dancing, posturing with the emblems; the sun is just rising. They dance forward again towards the *rɔm* leader, and erect the emblems in the ground before him so that they stand upright, with the rays of the sun illuminating their vivid colors. The leader rises to address the visitors, telling them how well they have danced, how fine are the emblems; and now here are the trade goods for their taking, and the food ready for them to eat. Then the Liverpool leader stands up and speaks of the trade goods his people have brought, and the food which they have prepared. A feast follows, and immediately afterwards the goods are exchanged and distributed. The *rɔm* emblems remain standing on the ground for several days; they are then taken down and dismantled and their poles, stripped of the binding string and feathered pendants, are put into the water. This completes the *rɔm.*

3. *The Midʒan.* As a preliminary to the *midʒan* ceremony, a messenger comes to the Gumader-Gunwinggu from the coast near the Liverpool River mouth in Gunbalang, Gunavidji, or Nagara territory. He discusses with the local people the possibility of holding a *midʒan* in the near future. If the Gumwader-Gun-

winggu are agreeable, several men and youths (or children), fathers and sons, cut their hair and place the shorn lengths in a dilly bag.[21] They give this to the messenger, who returns with it to the coast. There people fashion it into string, arranged in lengths to form waist-bands. As they roll the hair on their thighs, using a bobbin (or spindle), they show it to their friends and sing. When it is completed, they take a long pole and hang from it at intervals various lengths of the human hair twine. A messenger goes again from the coast to Gumader with the news that the string is made, and the people ready to "put it back *midʒan*" to the original owners of the hair.

The Gumader group clear the grass to make a "ring place," collect and prepare a large quantity of food, and put together baskets, spears, and so on. The messenger returns to the coast to see that his own people are properly prepared. Presently they gather, and set off for Gumader. When they are only a short distance away one man goes on ahead to announce them, and the Gumader people show him the dancing ground.

At about sundown on the same day, the Gumader men, women, and children assemble on the ground, all painted with realistic designs of various salt water fish (for the *midʒan* comes from the seacoast).

The visitors have painted themselves with similar fish designs, and remain hidden some little distance away. Then the singing man and drone pipe player enter the ground, about which the Gumader people are arranged. As they sing and play, they hear the sound of the fish dancers' stamping feet. Then the visitors come on to the ground holding long strings; as they pull these, "jumping" fish (of various varieties) come out in rows from the bushes. On each line there are six dancers, who dance forward on to the ground as they are "hauled in." (This symbolizes the catching of these fish, as well as their being brought in by the incoming tide.)

As the Gumader people watch, more "fish" are "brought in." Some fish actors lie on their backs, one behind the other in a row, the head of one between the legs of the next, holding the fishing line, beside them or across their bodies; they wriggle along thus on to the ground, being "hauled in" to the shore. (This is similar to sacred *mareiin* dancing.[22])

On the following day the same fish actors are pulled in on to the ground, wriggling all the way. While they still lie in rows on their backs, women come

21 A dilly bag is a native basket of varying shape, made by the twining technique, the inner layer of the pandanus leaf and water lily fiber being two of the main materials employed; the former is used in making tightly woven mesh, the latter in the openwork type of basket.

22 This is ceremonial dancing by initiated men on the sacred ground: *mareiin* means sacred.

forward and beat them with branches. (This refers to the collecting of fish, which are caught and thrown on the river bank or seashore; women come along later and pick them up, signified in the ritual by their hitting the "fish" men.) As the women throw aside the branches, the "fish" men rise (that is, the women are taking the fish back to the camp), and taking hold of the string, each line dances with it (that is, the women are taking the fish back with string threaded through their gills).

When this is completed the actors and women go to stand by the watching Gumader people.

From among the bushes two painted men dance out together, representing fish hawks. As they dance forward, they hit their bodies with branches (their "wings"). They come on to the ground, and finally join the onlookers.

Two more dancers appear from the bushes, representing male and female salt-water turtles. They dance together onto the ground "as if floating on the sea." Immediately following them comes the brown eaglehawk who preys on the turtle, dancing forward from the bushes.

Finally a group of painted men brings in the large *midʒan* pole which was constructed on the coast. They come posturing with it towards the "ring place," each dancer holding one of the lengths of human hair twine attached to the main pole. (These are many fishing lines, and the dancers holding them are the fish.) They dance forward with it, then back into the bushes where they hide it again.

That same night, to the accompaniment of singing, all the visitors paint themselves with designs representing larger fish, the *malimali* (big mullet), the *dʒinumbu* (jumping Queen fish), the *wurud* (large trevalli), and many others. They are not ready, however, until very early on the following day; then, as the sun rises, they lie on their backs, wriggling along as men on the dancing ground pull them in with string.

After this the various fish dance in pairs, one group after another, followed by the two turtles. Behind them come dancing men bringing the hanks of human hair twine removed from the *midʒan* pole; when the Gumader people see this, they all begin to clap their hands rhythmically to the singing. Four groups of men dance forward holding the strings. Round and round the ground they move, until the Gumader spread out a blanket before them; then, with much posturing, they place the hair twine upon it in rows.

This terminates the ceremony. The Gumader people bring forward spears and baskets and other goods and hand them to the visitors; then the food which has been prepared is distributed among them, and the *midʒan* is completed.

In this way the Gumader people receive the beautifully made hair twine worn

in the form of waist-bands by fully initiated men and occasionally by women. The twine has been prepared from their own hair by their trading partners, the salt water people, and in return for this work the latter receive various material objects which they consider valuable.

4. *The Wurbu.* As in the case of the *midʒan,* various Gunwinggu men and youths (or children), fathers and sons, cut their hair. This they send west and northwest towards Cape Don, Port Essington, Croker or Goulburn Islands, notifying the people there that they are willing to have a *wurbu.* Men, women, and children from that locality gather at a certain camp, where some begin to manufacture twine from the hair, and other use banyan tree fibre to make small net mats resembling baskets. These mats (*mari:bi*) are approximately one foot wide and two feet long, with string attached; they are worn around the neck, falling down across the chest. *Mala:ga* net bags or baskets are also made from banyan fibre.

When the hair hanks, mats, and bags are completed, all the people assemble, and send a messenger (the *wurbu* leader) to Gumader, to notify the Gunwinggu that the visitors are about to come. This leader tells the Gumader group: "You get ready, for we are going to bring the *wurbu.*" He returns to his own people, who have in the meantime approached Gumader. They all come towards the Ginwinggu camp, but stop some little distance away; again, one man goes on to announce their arrival. The Gunwinggu men, women, and children paint themselves and come on to the dancing ground; there they begin to sing the *dʒuŋgerin* (from Pine Creek in the southwest, and originally belonging to the Djawun and Wogaman tribes). While this is going on, the visitors come closer, and soon the local people pause from their singing to watch.

The visiting men come first, followed by the women. There is no ritual dancing, but they form a long line, singing and posturing as they come (similar to a line of men returning from the sacred *mareiin* ground to the main camp). Two men hold horizontally a long pole from which hang down four hanks of hair twine; then these are taken from the pole, and four men each hold one hank between their teeth, dancing one behind the other towards the camp, and then back again to hide the twine.

All now enter the camp and sing their own songs, and "dance *dʒamalag,*" hitting their *dʒamalag* partners and having sexual intercourse. This follows the pattern described above. Afterwards they dance the special *wurbu.* "We want to stop here for some time, in order to put this *wurbu* in for you," the visitors say to the Gunwinggu.

Each day for an undefined period they hold the *dʒamalag,* dancing at the

same time the *wurbu,* until the visitors decide it is time to return home. Both sides then prepare their exchange gifts, saying to each other, "We must put our things ready; we shall show you in the late afternoon, then we'll give you."

Both the Gunwinggu and the visitors paint themselves, and the former sing. Then the visitors bring up the hair fibre, forming a ring to conceal from view the four men bringing up the hair; line upon line of men dance forward, and the four men who hold the hair retreat and hide it. This continues through the night until shortly before daylight, when the following ceremony is performed; this is of an increase nature, and suggests the later presentation of eggs by the Gunwinggu. The visitors dig a small depression on the dancing ground, and put grass within it: this is the nest of the brolga (the native companion bird). They make two "eggs" of moulded white pipeclay, placing them in the nest. First, two men (with egg designs painted on their chests) dance up to the nest, discover the eggs but do not touch them, and dance back again. Another two men (painted with the same design) dance forward to the nest, pick up the eggs, and return with them.

Soon after this, a group of men surround the four who have the hanks of hair; they form four lines and dance on the ground, posture with the hair held between their teeth, and return to their original position. Again they come forward calling out, as all the people, Gunwinggu and visitors, surround them. Two men, each holding a special *mi:d'duwan* forked stick,[23] supervise the dancing; they wave their sticks, dispersing the crowd, so that the four men with the hair dance by themselves. All call out, and the Gunwinggu people spread out a blanket, on which the hair hanks are placed. As the singing continues, other visitors bring forward their breast mats and bags, spreading them on the blanket. At the same time the Gunwinggu come forward with spears and dilly bags full of birds' eggs. When the exchange and distribution have been made, a feast is held, and soon afterwards the visitors return to their own camps.

5. *The Mamɔ:ruŋ.* The Djawun and Gundjeibmi *mamɔ:ruŋ* begins in the following way. A small Gunwinggu boy may find and kill a goanna (iguana, a large lizard) or catch a tortoise or fish: the bones from this are kept, because it is the first game he has caught. Or the small boy's hair may be cut, and the shorn ends kept—or the same thing may be done if the child dies. The child's father then decides that a *mamɔ:ruŋ* must be held soon; he sends a messenger with the hair or bones (as the case may be) into the Gundjeibmi and Djawun country to the south and southwest, where this is handed over. The local people keep the

23 This is a limb of a tree cut to show two prongs, being a specially decorated object used in this ceremony.

hair or bones for some time; when they are ready, they send a message stick back to the Gunwinggu.

They start off from their camps bearing bundles of bamboo spears. The Gunwinggu clear the ground near their camp, and make a dancing place. A messenger is sent, and the visitors dance in holding their trade goods. Since they come from the vicinity of Pine Creek and Katherine (European settlements along the North-South Road) they bring goods of European origin, such as lengths of wool and cloth, as well as their indigenous trading commodity, bamboo spears.

Among the trade goods of cloth and wool is tied the small fragment of hair or bone originally sent to them. They dance with this towards the boy's father and mother, who sit on the ground, and posture before them, showing the goods and the hair or bones; as they watch, the parents commence to cry.

Two of the visitors then dance the traditional *dʒuŋgerin*, one dancing with the hair or bone and passing it on to the other. At the same time women are dancing, having piled up their trade goods in heaps. When the dancing is finished, the visitors collect their goods and make camp.

This continues for some days, while the Gunwinggu also sing and dance, and the *dʒamalag* is held during the evenings (as described above). When it is decided to complete the *mamɔ:ruŋ*, the visitors take the initiative, saying: "After we do all our dancing, and you do all yours, we will give you that thing (the bones or hair), and we will return to our country."

Late in the following day, all assemble again on the dancing ground, and some trade goods with the hair or bones are brought and placed in a heap before the child's parents. All the Gunwinggu begin to wail. Afterwards the goods are collected again while all the visitors smear themselves with red ochre, put on their waist-bands and forehead strings, and obtain a long pole which is also ochred. On this pole they hang their cloth and wool and the hair or bones, and two men dance forward with it, all the other men and women dancing around them. They go back to their original position and hide it, bringing it forward again after an interval; then again it is taken back. Finally the last *dʒuŋgerin* is sung; the long pole with hanging cloth and wool and the fragment of hair or bone is brought forward once more, everyone dancing except the child's parents. Then with a long drawn "ah!" the goods are placed on a blanket before the parents. Other men come in with bundles of bamboo spears, heaping them among the other goods, while all the Gunwinggu begin to wail as they look at the hair or bone placed in a prominent position.

Then the Gunwinggu parents, assisted by their children and near relatives, bring forward their own things: various objects of indigenous manufacture, among

them being goods obtained through the other trade ceremonies—all these are heaped up to make an impressive showing. Then they discuss relative values and each group makes a distribution, before food is brought up and divided. After the feast, when all the goods have been distributed in accordance with obligations, the visitors return to their own country.

6. *The Njalaidj.* The final ceremony in the trading cycle of the Gunwinggu is the *njalaidj,* associated particularly with Dangbun and Jangman groups to the south and slightly to the southwest of Oenpelli, in country adjacent to the Gunwinggu but farther inland. It comes from the Jangman and is handed on (through trade ceremony) to the Dangbun (whose language, Gundangbun, is said to be allied to the Gunwinggu); the Jangman themselves rarely come.

The Gabari and Gumader Gunwinggu send, in the first place, a message stick to these "top side" people,[24] requesting them to come up and dance the *njalaidj.* Presently the Dangbun come together and begin their journey to Gabari and Gumader, "bringing that *njalaidj* song." The Gunwinggu have heard of their coming and sit waiting on their dancing ground, singing. Then in dance the Dangbun people, singing their *njalaidj,* and when this is done the Gunwinggu sing and dance the *nanaru* (Goulburn Island) songs.

An interval is now spent in feasting, for the Gunwinggu have prepared much food, and the Dangbun have brought more with them. After some days, they decide to hold the proper *njalaidj.* Dangbun men go some little distance away and prepare themselves for the ceremony. They remove blood from their arms, and paint themselves with it, then fasten feathers (which they have brought with them) in various designs on their faces and bodies. In the meantime, the Gunwinggu wait on the dancing ground, with the Dangbun women. (Informants comment, "Of course the Dangbun women know what is happening, but we don't know; we sit there expectant.")

The Dangbun men construct conical headdresses of paperbark and grasses, superimposed with feathered designs fastened on with arm-blood; these are very much the same as those used in the sacred *kunapipi* dancing.[25]

On the ground all the Dangbun men (those not acting) and women begin to sing, the men rhythmically tapping boomerangs together.[26] Then the decorated and headdressed dancers emerge from the bushes and come towards the clearing, all dancing together.

24 "Top side" people in the local parlance refers to inland people, those belonging to the hill country as opposed to the lowland coastal groups.

25 R. Berndt, *Kunapipi.*

26 This is in the southern Arnhem Land and central-western Northern Territory tradition, when the drone pipe is not used as a musical accompaniment.

The same dancing, followed by *dʒamalag*, continues throughout the evening. It is repeated the following evening, and on the next morning the men again come up decorated and wearing their headdresses. They dance imitating various fresh water fish, wild honey, snakes, and goannas, until finally each actor pulls off his headdress and removes his feathers, and buries them on the dancing ground.

The Dangbun then come forward with their trade goods, stone spear heads, and two varieties of red ochre, and heap them on the ground before the Gunwinggu. The latter bring up their goods: in the Macassan trading period these were cloth, iron, rice, tobacco, and so on, before that time indigenous commodities (spears, fishing gear, nets, mats, and baskets), and today largely goods of European origin (or before the last war, goods obtained from Japanese pearlers and traders on the coast). The Gunwinggu and adjoining coastal groups, such as the Gunbalang, Jiwadja, and Maung, previously held a monopoly in Macassan trade goods, which people farther inland, like the Dangbun, could obtain only through the *njalaidj*; the ceremony, it is said, was instituted for this purpose.

The *njalaidj* dancing, however, allegedly resembles some of the less sacred *kunapipi* ritual.[27] The *kunapipi* itself is sacred, much of it being seen only by adult men or women; the *njalaidj*, therefore, "was made for all to see." The *kunapipi*, too, came through Dangbun territory. Apparently the *njalaidj* was introduced first for economic reasons, being followed later by the sacred *kunapipi* rituals, and still later by the *lɔ:rgan*, a semi-sacred mortuary ceremony.

III

The above outlines very briefly the six principal trade ceremonies of western Arnhem Land, from the Gunwinggu point of view. Needless to say, an equally rewarding study could be made in relation to other tribal groups. The Gunwinggu engaged in trade with the materialistic aim of obtaining articles which they felt to be essential or desirable. For this purpose they were obliged to offer desirable goods in exchange, obtained either through their own personal effort (that is, indigenous commodities made by themselves), or through trade with adjacent groups (via the trade ceremonies described above).[28] Only the more important commodities have been indicated here.

---

27 *Kunapipi* dancing is a special form associated with the rituals belonging to the *kunapipi* cult. These are totemic dances on the sacred ground. The word *kunapipi* cannot be translated by a single word or phrase. An explanation of the various types of *kunapipi* dancing will be found in Berndt, *Kunapipi*.

28 There can be little doubt that Indonesian traders did stimulate the exchange of goods, leading to a greater emphasis on material "wealth." A study of Macassan trade on the North Australian coast would involve, for instance, consideration of organized trading arrangements,

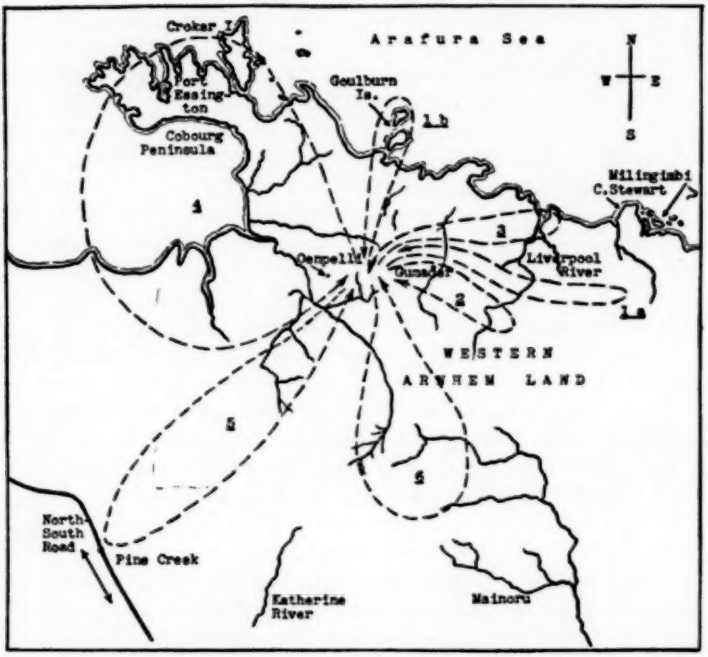

FIG. 1. Distribution of trade ceremonies in Western Arnhem Land, Northern Territory of Australia.

1a. *Eastern Dʒamalag:* through which come serrated and shovel-nosed spears
1b. *Northern Dʒamalag:* through which come coastal goods, such as nets, lines, baler shells, etc.
2. *Rɔm:* through which come baskets, spears, spearthrowers, stone knives, and feathered string
3. *Midʒan:* through which comes human hair twine for waist-bands
4. *Wurbu:* through which come breast mats and bags
5. *Mamɔ:ruŋ:* through which come European goods and bamboo spears
6. *Njalaidj:* through which come stone spear heads and two varieties of red ochre

The *rɔm, midʒan, wurbu, mamɔ:ruŋ,* and *njalaidj* are associated, by the Gunwinggu, with certain specific regions or directions. The *dʒamalag* is more difficult to localize; it seems to have come originally from the southwest, and later from the east and north, but is also used as a subsidiary ceremony in the *wurbu* and *mamɔ:ruŋ*. Being performed today far more frequently than any of these other trade ceremonies, it has gradually come to be regarded as belonging almost exclusively to the Gunwinggu and their immediate northern neighbors (the Gunbalang, Maung, and so on).

The *dʒamalag,* then, appears to represent the Gunwinggu contribution to this cycle of trade ceremonies, with special reference to the east and north.

The diagram (superimposed on a map of western Arnhem Land) shown in Figure 1 demonstrates the distribution of the ceremonies, from the viewpoint of the Oenpelli and Gumader Gunwinggu.

All these ceremonies follow a broadly similar pattern, the *dʒamalag,* however, being of less specific application, and its dancing rather less spectacular. The *dʒamalag* emphasis on sexual licence does not detract from the importance of the economic exchange, for sexual intercourse between such trading partners is not only said to establish and consolidate intertribal friendship, but is regarded as being in itself a form of exchange. Its culminating feature is the ritual presentation of trade goods, such as the shovel-bladed or serrated pointed spears from the east, highly valued by the Gunwinggu.

In the case of the *rɔm,* distinctive emblems are sent to summon the visitors, who perform special dances apparently of totemic nature; and again the ritual exchange of goods is a culminating feature. The *midʒan* introduces a different series of dances, most relating specifically to the seacoast; visitors have prepared hanks of twine from hair belonging to the local people, and receive in payment a range of indigenous material objects. In the *wurbu,* hair is sent to the visitors for a similar purpose, but this feature is regarded as incidental to the obtaining of special breast mats and baskets. The culminating *wurbu* rituals, with the brolga (native companion) dancing, seem to be of increase intent, an aspect reflected in the presentation of eggs at the exchange of goods. The *mamɔ:ruŋ* is not associated with dancing of any special significance, the *dʒuŋgerin* songs relating principally to culture contact subjects, from sources along the North-South Road; the fact that an object associated specifically with the child of the sponsor (whether the

establishment of trading settlements, the use of Aboriginal employees, the introduction of trade currency, and of the lingua franca known as "trade Macassan"; the attempted growing of gardens; the making of pottery on the northeast coast; the introduction of a wide variety of goods and food; and so on. Discussion of these points is obviously beyond the scope of the present paper.

former be living or dead) is used in the dancing and wailed over is not properly explained. It has evolved perhaps from mortuary ritual, for the tribal groups bringing the *mamɔ:ruŋ* to the Gunwinggu have elaborate death ceremonies extending over a number of years, and involving exhibitions of goods which are finally distributed.

The *njalaidj* is said to be the most spectacular of all the trade ceremonies, for it approximates more closely the beautiful sacred *kunapipi* dancing. It is commemorated in many myths relating to the ancestral period. Through it the Gunwinggu receive, although more rarely now than in the past, the red ochres used in local cave paintings, and the special stone spears made only by the Dangbun (the latter also coming up through the *rɔm*).

No attempt is made here to describe these trade ceremonies in any detail, or to engage in comparative discussion, which can more profitably be attempted later. From this outline, however, it is evident that ceremony and economics (as described here) are so closely interwoven that the one could not function without the other. The ceremonies themselves are associated with intertribal gatherings. Members of various tribes come together not merely for the enjoyment to be derived from the dancing and singing, but for the express purpose of obtaining, through exchange, goods which they desire and need. The exchange itself serves as an eagerly awaited climax, releasing the emotional tension which has accumulated during the rituals. It is not, then, a purely commercial transaction, comprising merely the handing over of desired commodities. The value of the goods themselves is felt to be enhanced and emphasized, in varying degrees, by the elaboration of the ritual of which they are, essentially, the focal point. The utility of the objects in question, although serving as the basis for their selection, is thus not the only criterion involved in assessing their ultimate value as items of "wealth."

The intertribal gatherings, lasting usually for several weeks at a time, are accompanied by a certain interchange of ideas which has had some influence on the diffusion of cultural traits as well as of material goods. They provide, ideally, opportunities for settling differences as well as for establishing friendly relations. At such times, marital ties are relaxed, and conventionally defined erotic behavior (for example, in the *dʒamalag*) officially permitted and encouraged; betrothal arrangements are discussed, marriages take place, or assignations are made; the routine activities of everyday life are in some degree interrupted, both hosts and guests devoting their time to enjoyment of the ceremonies, of gossiping and making love, of feasting, and of eventually receiving the goods to which they have been looking forward for some time.

The main point we wish to make here is the ceremonial importance of the

exchange of goods in western Arnhem Land, despite the increasing reliance on European sources where the transactions involved are non-ritualized, individual, and relatively impersonal in nature. In each trade ceremony cited, the ritual and the exchange are interdependent, neither being significant in context without the other, and both together being linked with a special emotional response on the part of the groups and individuals concerned. It is this feature which allows us to describe them under the heading of "ceremonial economics," and the giving and receipt of commodities as "ceremonial exchange," thus distinguishing them from the form of economic exchange discussed by Dr W. E. H. Stanner[29] or by Dr D. Thomson.[30] This attempt to clarify in some degree the relevant terminology may perhaps lead to greater precision in recording and analyzing the material relating to this subject, for trade ceremonies such as those described are and have been fairly widely distributed throughout Aboriginal Australia.[31]

Bibliography

Berndt, R.

1948 *Badu, Islands of Spirits* (Oceania, vol. 29, pp. 93-103).

1951 *Kunapipi* (F. W. Cheshire, Melbourne).

Djanggawul (ms.).

Berndt, R. and C.

1947 *Discovery of Pottery in North Eastern Arnhem Land* (Journal, Royal Anthropological Institute, vol. 77, part 2, pp. 133-138).

1949 *Secular Figures of North Eastern Arnhem Land* (American Anthropologist, vol. 51, pp. 213-222).

Sexual Behaviour in Western Arnhem Land (Viking Fund Publications in Anthropology, in press).

Arnhem Land, its History and its People (F. W. Cheshire, Melbourne, in press).

"Erotic Stimulation in Western Arnhem Land Songs" (in *Psychoanalysis and the Social Sciences*, vol. 4, International Universities Press, New York).

Basedow, H.

1925 *The Australian Aboriginal* (Adelaide).

Elkin, A. P.

1934 *Anthropology and the Future of the Australian Aborigines* (Oceania, vol. 5, no. 1).

1938 *The Australian Aborigines* (Sydney).

1950 *The Complexity of Social Organization in Arnhem Land* (Southwestern Journal of Anthropology, vol. 6, pp. 5-14).

29 Stanner, 1933-34.

30 Thomson, 1949.

31 See for example, Elkin, 1934, p. 12, and McCarthy, 1939, p. 179.

ELKIN, A. P., and R. and C. BERNDT
1950 *Art in Arnhem Land* (Melbourne and Chicago).
Social Organization of Western Arnhem Land (ms.).

HARNEY, W. E., and A. P. ELKIN
1949 *Songs of the Songmen* (Melbourne).

KABERRY, P.
1939 *Aboriginal Woman* (London).

MALINOWSKI, B.
1922 *Argonauts of the Western Pacific* (London).

McCARTHY, F. D.
1939 *"Trade" in Aboriginal Australia, and "Trade" Relationships with Torres Strait, New Guinea and Malaya* (Oceania, vol. 9, pp. 405-438; vol. 10, pp. 80-104, 171-195).

STANNER, W. E. H.
1933-34 *Ceremonial Economics of the Mulluk Mulluk and Madngella Tribes of the Daly River, North Australia* (Oceania, vol. 4, pp. 156-175, 458-471).

THOMSON, D.
1949 *Economic Structure and the Ceremonial Exchange Cycle in Arnhem Land* (Melbourne), pp. 1-106.

WARNER, W. L.
1937 *A Black Civilization* (New York).

UNIVERSITY OF SYDNEY
SYDNEY, AUSTRALIA

PATTERNS OF AGGRESSION AND THE WAR CULT IN SOUTHWESTERN PUEBLOS

FLORENCE HAWLEY ELLIS

THE PUEBLO INDIANS of the Southwest enjoy a reputation for peacefulness which, in the main, they have appeared to deserve because in historic times they were more peaceful than Plains peoples and the Apache.[1] Sedentary agriculturists necessarily must concentrate their attention upon communal coöperation in what they believe to be the supernatural as well as the natural requirements of growing crops rather than upon the possible delights or gains of warfare. The ancestral tribes which settled down as farmers may well have retained a previous tradition of warfare and the organization necessary to its pursuit. But Newcomb[2] has pointed out that this characteristic of hunting and gathering groups in the Plains rose to its famed heights principally in the historic period after growth of tribes and introduction of the horse had so increased the interest in hunting areas that bloody competition could but result. During the prehistoric period Pueblo farmers presumably suffered inroads from Navaho-Apaches infiltrating into the Southwest, probably likewise from Shoshonean-speaking Basin peoples,[3] and possibly even from Yuman warriors of the Colorado River country. Some armed resistance was necessary for self protection, but beyond this the Pueblos generally have been presumed to be of nonaggressive temperament. In the light of available data such assumption appears exaggerated.

Examination of the history, traditions, formal social organization, and family life in the various pueblos suggests not only some appreciable differences between degrees of peacefulness today but likewise a definite underlying stratum of personal aggression, apparently related primarily to the competition so thoroughly decried by all. Pueblo people are endlessly bickering, with covert expressions of hostility against anyone who does not quite fit into the Pueblo pattern, who has

1 It has been pointed out that the Navaho conducted occasional raids for food, horses, and women, and as a measure of reprisal, but were not warriors as such (Clyde Kluckhohn and Dorothea Leighton, *The Navaho*, Cambridge, 1946), p. 5.

2 W. W. Newcomb, Jr., *A Re-examination of the Causes of Plains Warfare* (American Anthropologist, vol. 52, pp. 317-330, 1950).

3 Between historic forays with Navaho, Apache, and Ute, the Pueblos often traded with these traditional enemies, but meeting sometimes entirely beyond village outskirts because of distrust (A. F. Bandelier, *Final Report of Investigations among the Indians of the Southwestern United States, Part I* (Papers, Archaeological Institute of America, American Series, no. 3, 1890), p. 164.

more or different possessions. Like any other human beings, these peoples are subject to jealousies, angers, and the desire for retaliation. It is true that they are trained from childhood against selfishness and deviation from their neighbors. The permissive atmosphere of childhood[4] minimizes development of frustrations and hence of an aggressive spirit. But the long emphasis upon conservatism leads to disapproving and irritated notice of even small variations from the mode. Although resentment usually comes into expression through gossip and avoidance (primary forces of social control), physical expression actually is not as thoroughly prohibited by culture mores as might be surmised from a formalized or idealized sketch of Pueblo configuration. Children are spanked by relatives, a wife may be beaten for infidelity, and adult brothers and sisters sometimes angrily belabor each other with pieces of furniture, clubs, or iron bars. It is admitted that even recently an unusually beautiful woman or successful hunter might be killed—quietly and *accidentally*—or someone's exceptionally fine horse be found dead or his big house despoiled. Ownership of a tractor or truck may be cause for neighborly resentment in a modern pueblo, expressed in official complaint against the owner's "leaving the Indian way" or hidden in the derogatory remarks of self-righteous reactionism. Individuals charged with giving out secrets, with witchcraft (a term which can be used to cover even the too individualistic project of opening a village service station), or with other subversive activities are known to have been beaten by War Captain or Governor (who inherits and carries a whip as well as a staff of office in some pueblos),[5] or to have been imprisoned in a "circle." Some have been killed. The imposition of village-sanctioned punishment of competition and individualism no doubt has aided tremendously in dissipation of hostilities officially permitted little other expression.[6] Jealousies

4 Dorothy Eggan, *The General Problems of Hopi Adjustment* (American Anthropologist, vol. 45, pp. 357-373, 1943); Esther Schiff Goldfrank, *Socialization, Personality and the Structure of Pueblo Society* (American Anthropologist, vol. 47, pp. 516-537, 1945); Florence Hawley, *Group-Designed Behavior Patterns in Two Acculturating Groups* (Southwestern Journal of Anthropology, vol. 2, pp. 133-151, 1946).

5 The "Governor's cane" presented by Lincoln to Pueblo governors and the Spanish cane presented by the king are symbols for the office of governor, created by Spanish officials in 1620, but the stick-canes handed down within the other offices may well be of native origin. The governor's whip may be of Spanish background, but physical punishment is too general to suggest importation.

6 One of White's Acoma informants narrated the horse-whipping received on their bare backs by the few young "pro-American" boys who were not participating sufficiently in ceremonial life. The acting governor ". . . was made (insane) when he was doing this; he was foaming at the mouth." The offenders were kept in the kiva for some twenty hours (with the ladder drawn up to prevent escape) while speeches were made to them by the medicine men, the Cacique, and the War Chief (Leslie A. White, *New Material from Acoma*, Bulletin, Bureau of American Ethnology, no. 136. p. 332).

and differences of opinion between groups within a pueblo can not be so treated: factionalism such as is rampant within most of the modern villages reached its ultimate end in the Oraibi split in Arizona and the Laguna split in New Mexico. Archaeologists presume such antagonistic splitting to have been one factor responsible for the great number of prehistoric sites in the Southwest. Accumulating evidence points to a related cause, internecine warfare based primarily upon antagonisms and jealousies, as one basis for extermination or dissemination of parts or the whole of certain prehistoric and historic Pueblo tribes and the burning of kivas or of villages. Aggression, usually prohibited manifestation, was permitted expression in a war cult and war leaders, both considerably more important in the lives of the Pueblo people than usually is recognized.[7]

The pueblo officer most likely to be encountered by outsiders at present is the governor whose position is designed to handle contacts with the Whites. In a partially parallel position, the old native but still existent office of head War Captain (often referred to by the Indians today as "Indian Chief"), aided by an assistant, protected "the village against enemies—external, internal, and supernatural."[8] The principal officers still common to all the Rio Grande pueblos, plus Acoma, is that of Cacique[9] or Town Chief (two being characteristic of the Tewa moiety system), carrying somewhat different positions in relation to political control in the various villages, but in each village a chief priest and director of the ceremonial calendar by which the pueblo year is ordered. The War Priest appears to have been the other leading and very important member of each religious hierarchy in the past. Whether the War Priest or the Cacique was the more important in the pre-Spanish period is debatable; in some pueblos the former is said by modern informants to have been over the Cacique and in some just below the Cacique. The relative seclusion of the Cacique, however, appears as a contrast to the more public duties of all the other officers.

Understanding of the actual position and duties of the War Chief or War Priest and his relation to the other officers and to the people of his pueblo (a key

7 Bandelier in his *Final Report* and White in his *Santa Ana* have remarked this situation. Bunzel in her *Introduction to Zuñi Ceremonialism* points out, "The war cult of the Pueblos, as in other tribes, is greatly in abeyance at the present time due to enforced peaceableness. Although the Pueblos probably never were aggressive warriors, intertribal warfare was once an important part of life and was accompanied by elaborate ceremonies" (47th Annual Report, Bureau of American Ethnology, pp. 467-544, 1932, p. 525). It is obvious, when one considers the matter, that to have inter-Pueblo warfare, *some* Pueblos must have been aggressive; the point of the present paper is to indicate that this was so to a much greater degree than hitherto has been supposed.

8 Fred Eggan, *Social Organization of the Western Pueblos* (Chicago, 1950), p. 250.

9 A word introduced by the Spaniards to designate the principal leader of each pueblo, a priest known among his own people by a term of their own language.

to our problem) has been clouded because of variations in nomenclature (War Chief, War Priest, and War Captain sometimes appearing as synonyms) and because there has been no such functionary in most pueblos for some time.

To clarify and work into some pattern the scattered data available in past reports and from modern studies, in which references pertaining to the war complex often exist only as subsidiary information on some other subject, everything pertinent has been here assembled; deliberate redundance has been dared for the sake of accuracy.

Bandelier in 1889, some sixty years closer to the aboriginal system than we stand today, commented "Although the Pueblos have been at peace since the Navajos were repressed, war still remains theoretically their chief duty and occupation, and the war organization is kept up carefully."[10] Pueblo tradition indicates that the people lived in considerable jealous fear of "power" derived from the supernaturals but controlled by other groups of human beings:[11] a pueblo did not hesitate at forays of punishment against people who appeared to threaten them with this undue "power" as well as against those who had raided their possessions. Just as the Cacique was considered to represent the female element, symbolized in his fetish of the Earth Mother, and was dedicated to the general well-being of his people, so the War Priest represented the male element symbolized by his fetish of the great knife of war and was dedicated to the general protection of his people.[12] Much of the confusion concerning the terms "War Priest" and "War Chief" is the result of the characteristic White presumption that a military leader is not a sacerdotalist, although to the Pueblos such a combination is entirely reasonable. The aid of the supernaturals, gained primarily through imitative magic in word or deed, was believed requisite for every major undertaking. In some pueblos the Priest seems to have led his forces; in some he engaged himself with producing "power" to weaken the enemy and strengthen his own men, whose field direction he left to the War Captains.

Bandelier has given us a clear picture of the general Keresan scheme of village authority, showing the interrelated social and governmental organization to have been based upon "four esoteric clusters." These were societies: the Hunters, the Warriors, the Medicine-man, and the Ya-ya or mothers, each of which was

10 Bandelier, *Final Report*, p. 285.

11 A situation still existent in witchcraft fears.

12 The Cacique was addressed as "mother" according to some of the older reports and the War Priest as "father." The more recent custom of speaking of the Cacique as "mother and father of his people" or even as "father" probably stems from loss of the War Priest in most modern pueblos or from realization that Whites would think it strange to find a male addressed as "mother."

divided into branches. The Ya-ya consisted of the Cacique and two assistant Caciques, the War Priest or "great medicine-man of war," the Hunt Priest or "charmer of game, the magician of the hunt," and the head of the Cikame society.[13]

The Caciques constitute, together with the three great shamans, the heart and centre of religious life of the tribe. The former have no vote in the tribal council, but the latter occupy in that body a prominent position. The Hishtanyi [War Priest] opens the council with a speech, and only after his prayer is the real cause of the meeting revealed to the assembly; thereupon the Caciques retire.[14]

These Ya-ya and two lesser officers, the head of the Koshare and of the Queraina societies (dedicated to clowning and to fertility), made up the "Principales Grandes" or religious government. Annually appointed by the Cacique (with advice from all others of the religious group) were the governor and the War Captain, plus his assistant.

The former is really an administrative officer, the latter a military leader and "sheriff." In matters where the council has pronounced its sentence, the governor commands the captain; but in religious matters and matters of war, the war captain is superior to the former. That the captain's office is also a religious one is shown by the fact that, while any of the great shamans who pertain to the Ya-yas can become governor, the war captain is never, to my knowledge, chosen from their number.[15]

The War Priest stood

by the side of the captain and his assistant . . . as spiritual adviser and magic aid. Whenever a campaign is organized, he goes with the force, or sends one of his own cluster of wizards. The war captain must take good care of this important personage, and should any harm befall the shaman in an engagement, the day would be lost for his people.[16]

He had charms which were supposed to preserve peace and to make the people rich; he kept

the time-honored idols which at a certain season of the year, are taken from their sheaths, and exposed in the inner private room of his abode, there to work beneficial results for the people. The Hishtanyi [War Chief] also must fast and do penance, but only for certain objects, not as the Caciques, for general interests. He is a powerful doctor, and may derive considerable income from his cures.[17]

13 Bandelier, *Final Report*, pp. 276-286.
14 *Idem*, p. 282.
15 *Idem*, p. 286.
16 *Idem*, p. 285.
17 *Idem*, pp. 282-283.

Before forays he painted the warriors with powdered manganese to make them brave, strong, and invulnerable.

The War Captain not only aided the War Priest but likewise guarded the Cacique and at the same time watched that the latter deported himself in a manner proper to his post:

> . . . the cacique can be punished in case of misdemeanor; he can also be removed if the tribe so directs in general council, or if the war captain or the leading shamans dispose. A degraded cacique seldom, if ever, lives long. There is too much danger in suffering him who is in possession of the most precious arts and knowledge to live while under a cloud. Shamans who dispose of idols or sell secrets are also got rid of in a similar manner. It is the war captain who, officially at least, attends to such executions. But nobody except a few initiated ones ever knows more than that the person has simply "died."[18]

Bandelier footnotes his text at this point with an interesting comment:

> Early in this year, 1889, an instance of deposition occurred, in which I succeeded, however, in averting the final catastrophe. It is the second time within nine years that I have been called upon to thwart a secret execution. The number of people who disappear among the Pueblos for alleged offenses, or for misdemeanor, is much greater than would be supposed.

Against this background, we can better understand the more recent reports on individual Keresan pueblos.

Acoma—At Acoma there are now three "Outside chiefs"—the War Chief and his two assistants—appointed at the annual elections. Their duties at present are concentrated upon conserving old customs, ceremonially promoting the water supply, guarding the medicine societies during retreats, discouraging witchcraft, and acting as executives for the Cacique. The Warriors Society has been extinct for some time. White received the impression that during periods of war the War Chiefs and the Warriors' Society were in complete charge of the village and that medicine men lent them aid by providing "power."[19] According to Acoma legend[20] the first War Chief (Priest) and his two lieutenants were appointed by Masewi, the elder of the supernatural twin war gods, specifically to receive the katcina-impersonators, a religious duty of importance. The War Chief (Priest) of this legendary period, and presumably of the period preceding annual "elections," served for life and was succeeded by his son. The twin war gods

18 *Idem*, p. 284.

19 Leslie A. White, *The Acoma Indians* (47th Annual Report, Bureau of American Ethnology, 1932), pp. 45-53.

20 *Idem*, p. 146.

were patrons of the Warriors Society and of the War Chiefs; they "symbolize courage, strength, and virtue"[21] and are famed as rain makers.

The modern War Chief (Priest?) is responsible, during his term, for a staff of office said to be the "pole on which the world rests," and for other ceremonial paraphernalia kept in rooms of his own house or in his official headquarters. During his twelve days of initiation he must make prayer sticks, visit and collect water from the distant springs, pray to the sun, and submit to whipping (purification: driving out evil) by the medicine men in the main kiva. Unbroken sexual continence and observation of many difficult routines and rituals are required during his term of office. His two aids probably parallel the "War Captains" of other modern villages, although they do not use the names of their patron deities.

Laguna—The founding of this village slightly before 1700 by Rio Grande Keres,[22] Acomans from an adjoining earlier site, and possibly some people from Zuñi, eliminates any possible historical background except that of the ancestral villages. What little we know of the period before the village split and lost its native organization in the later nineteenth century indicates that the War Captains represented the twin War Gods and functioned much as in Acoma. For many years now Laguna has chosen all officers by vote of adult males under a constitution.

Santa Ana—The Santa Ana origin myth closely parallels that of Acoma. The people, after the emergence, lived for a time at White House where they were in association with the katcinas, Masewi and Oyoyewi (twin war gods), and the Koshairi and Queraina. Before the gods departed they taught the people to form societies specializing in secrets from the various types of supernaturals. The war gods helped to organize the Warriors' Society (Opi) and selected two men to serve as their representatives.[23]

In former times, the major function of the war chiefs was military; it was their duty to lead war parties and to organize the pueblo for defense in time of danger. Warfare declined rapidly after the American occupation of New Mexico, and disappeared completely before the close of the nineteenth century. But the office of war chief did not become obsolete with the cessation of warfare. On the contrary, it has been preserved, and if anything the office is of greater importance than formerly. But its functions have changed materially. Although the Cacique may properly be said to be the head of the politico-religious organization of the pueblo, it is really the war chiefs who direct, control, and administer the ceremonial life and act as

21 *Idem*, p. 64.

22 Eggan, *Social Organization of the Western Pueblos*, p. 252.

23 Leslie A. White, *The Pueblo of Santa Ana, New Mexico* (Memoirs, American Anthropological Association, no. 60, 1942).

executive officers in the political affairs of the pueblo. The Cacique appears to be more or less of a symbol. He is the custodian of the spiritual welfare of his people. He prays and fasts so that the spirits will help him. But his role in pueblo life is almost wholly passive; he has very little to do with the people and their daily life, secular or religious. But the war chiefs are always in the midst of things. They have charge of almost all ceremonies that take place. And in cases where they do not have direct charge or supervision of the ceremonies they must be consulted regarding them in advance; they must sanction them before they can be given. Thus they are closely associated with all sorts of ceremonial activities: the fiesta for Santa Ana, the summer retreats for rain, communal work in the Cacique's fields in the old days; they lead the shiwana into the plaza when masked dances are held; they guard the meetings of the medicine societies during their curing ceremonies both communal and private; they must see that the kivas are kept plastered and in repair; they officiate at scalp dances; they have charge of communal horse herding. An important function of the war priests[24] is the observation of the sun to determine the times for the solstice ceremonies: Masewi begins to watch the sun rise in September for the winter solstice and in March or April for the summer solstice. Another important function of the war priests was the installation of a new Cacique and the selection of his successor, a gowiyé.

. . . The war priests are guardians of custom. They keep a sharp lookout to see that everyone observes the ancient ways. Offenders against custom, especially customs regarded as sacrosanct, are punished by the war priests. They are especially charged with keeping the pueblo rid of witches; it is their duty to discover witches and to execute anyone convicted of witchcraft. Only the war priests can call a meeting of the council when matters of Indian politics or religion are to be discussed.[25]

The responsibility of defending the pueblo rested upon the war priests. They were required to keep a lookout for the enemy, and, in time of attack, it was they who mobilized the pueblo for defense and took direct command of the fighting. Although every able bodied man was a warrior as well as a farmer, the Opi were regarded as especially fitted for war; they were man killers, and they had supernatural power. The Opi were the first to fight and they undertook the most hazardous duties.[26]

The Fire Society painted the faces of warriors before they went out to fight. They also "cured" the wounded and a Flint medicine man later tended the scalps

---

24 White uses the terms "chiefs" and "priests" interchangeably at this point. These officers appear to parallel those referred to in other pueblos as War Captains, although responsible for many priestly duties handed down from a War Priest whom we presume to have existed in the past as a leader of the man-killing Opi.

25 White, *Santa Ana*, pp. 102-105.

26 *Idem*, p. 305. White briefs Bandelier (*Final Report*, pp. 153-154) in details of Pueblo fighting equipment (pebbles, rocks, bows and arrows, war clubs, buffalo-hide shields and helmets) and tactics (ambush, surprise, house-top defense, and scalping). Bandelier states that the Pueblos practised scalping more generally than the Apache (*idem*, p. 184). Others maintain that scalping may represent a part of the considerable Plains influence in New Mexico.

stored in the Cacique's "office." Flint medicine men accompanied war parties to provide "power." The killer and the next to touch the slain enemy were initiated into the Opi. This society would have died out, as in most of the other pueblos, if the Santa Anans had not arranged to permit men to become "Animal Opi" after having killed certain types of animals:[27] a similar situation exists in Zuñi, Cochiti and (previously unreported) in Jemez. War tales of fights with Comanche, Apache, and Navaho often are accompanied by boasts that warriors of the home pueblo were far superior to those of other pueblos in handling enemies.

San Felipe—White reports, as for other pueblos, that the Cacique ranks above the War Captains and is the source of power, but that the War Captains, annually appointed by the Cacique, are connected with every important event of the village.[28] Their duties are those previously given for other pueblos. The Opi Society now is extinct. The Flint Society formerly had war functions; the Cacique, head of this society, was in charge of the scalps. The old scalps still are brought out, and men chosen to impersonate the Opi give the scalp dance every five years.

Santo Domingo and Cochiti—In his account of Santo Domingo[29] White brings up the question of the *nahia,* a term currently used to designate a man who has served as Masewi (first War Captain) four times. He found no evidence of an office specifically known as that of *nahia* in Domingo, but Goldfrank[30] was told that in Cochiti (where the usual two War Captains now are appointed annually) there formerly had been a *nahia,* War Chief of the pueblo and directly above the Cacique in position. He was a member of the Warriors Society, actual leader in warfare, and director of the War Captains, his assistants. The Warriors Society and the position of *nahia* were said to have died out together. Some of the functions of the latter fell to the Cacique and some to the War Captains. Dumarest,[31] earlier, had reported two *nahia* for Cochiti, the War Priest (sometimes member and sometimes leader of the Opi) and his assistant, who served for life and named their own successors.[32] They carried the usual duties of conserving custom, organizing the secret dances, and advising the

27 *Idem,* p. 314.

28 Leslie A. White, *The Pueblo of the San Felipe* (Memoirs, American Anthropological Association, no. 38, 1932), pp. 14-15, 54.

29 Leslie A. White, *The Pueblo of Santo Domingo, New Mexico* (Memoirs, American Anthropological Association, no. 43, 1935).

30 Esther Schiff Goldfrank, *The Social and Ceremonial Organization of Cochiti* (Memoirs, American Anthropological Association, no. 33, 1927).

31 Father Noël Dumarest, *Notes on Cochiti, New Mexico* (Elsie Clews Parsons, tr. and ed., Memoirs, American Anthropological Association, vol. 6, no. 3, 1920, pp. 137-236).

32 See also White, *Santo Domingo,* p. 39.

Cacique. We might suspect that Domingo's present use of the term *nahia* suggests a former War Chief who served for life but today was most closely approximated by one who had repeatedly served as head War Captain. The position and duties (including selection and supervision of the Cacique) parallels that in the other Keres villages. The Warriors Society is extinct at Domingo but, as in related towns, is known to have been associated with the Flint medicine society and the Koshairi. Bandelier noted that the head of the Flint Society accompanied or sent one of his medicine men to accompany a war party in the field.[33] Goldfrank's data (the clearest published to date on this subject) includes description of installation of the former *nahia* of Cochiti. He was dressed by the Cacique and equipped with bow, arrows, and tomahawk. With the *nahia*-to-be standing between them, the War Captains were addressed by the Cacique: "Father Masewi and Oyoyewi, here is Father *ompi*ᵉ *nahia*. Everything is ready. Now let us go, Father Masewi and Oyoyewi. You will be the ones to start *nahia ompi*ᵉ."[34]

Zia and Jemez—Modern Zia is one of the most conservative and secretive of the Keres pueblos. We know that at present there are two War Captains and that formerly, at least, they had a War Chief or Priest who was in control of tribal hunts and warfare. This priest and his aid installed the Cacique[35] and then were responsible for conferring with him in selection of the annually appointed secular officers, including two War Captains. The heads of the religious societies met to accept or reject the nominee. Stevenson states that the War *Priest* and his aid represented the supernaturals, Masewi and Oyoyewi, sons of the Sun Father, but we must surmise that she confused her data. Jemez, paralleling Zia in so many institutions and the other Pueblos in this item, equates its War Captains with the twin war gods and the War Chief with the Sun. In Zia the twin war gods were patron dieties of the Warrior Society; but concerning the expected relationship between War Priest and the Opi, Stevenson says nothing. The Jemez war officers[36] form a council which carries religious duties but which counts as its main function the protection of the village. The head of this group is the War Chief or Priest, who is known as "Father." Although this term likewise is used in addressing the Cacique and any member of a medicine society, we

33 Bandelier, *Final Report*, p. 285.

34 Goldfrank, *Cochiti*, pp. 39-41. "Starting" meant officially assuming office.

35 M. C. Stevenson, *The Zia* (11th Annual Report, Bureau of American Ethnology, 1894), pp. 16-19, 121-123. The present pattern of Cacique and *two* assistants contrasts with her statement of Cacique and one aid, whether through faulty data or change of pattern since 1894.

36 Florence Hawley, field notes. Parsons' *Jemez Pueblo* gives little information on the matter.

note that the War Priest's fetish of black feathers and stone blade is considered to represent the male element and that of the Cacique the female. The War Priest of Jemez is supposed to have led the people out from the underworld and since to have held the most authoritative position in the village. He was formerly chief of the war society. The only fault found with the present War Chief is that he is a member of the bear-killing rather than the man-killing Opi, the latter being extinct. To provide the present incumbent with the proper credentials, a few years ago actual plans were made for a murder to be done inside the pueblo but premature discovery of the plan prevented its consummation.

The two aids of the Jemez War Chief, his left and his right hand man (customary Tanoan classification), represent the twin war gods. Like the leaders of societies, they are selected by the council, composed of the ceremonial societies. At his death the War Chief is succeeded by his left hand man. At all times the War Chief is supposed to be on guard for his people against enemies, witches, and informants, although the men who stand guard during retreats of the medicine societies are the annually elected War Captains. The present War Chief is of great influence as advisor in the council.

The Arrow and Eagle societies of Jemez might be called a national guard, alert to go into battle at a moment's notice. In the kiva they were taught techniques of hunting, fighting, and withstanding pain. In attacks the War Priest was supposed to be in the forefront, whacking at heads with the four foot stone blade fetish. The power of this fetish is considered to be so important to the pueblo that it is placed at the front of the altar of each society while ceremonies are being conducted.

Certain characteristics point to the Tanoan pueblos (some or all) carrying a tradition of warfare beyond that of the Keres. The ceremonies claimed to be native to Jemez are those of the war society or of war orientation; most of the katcina cult is thought to have been borrowed. In their tales of times past they identify ruined sites as earlier homes of a part of their people, many of these sites having been razed by related villages. Formerly, they say, all the members of one village belonged to a single medicine society. If one society chanced to incur the fear and envy of others by showing too much evidence of supernatural "power," it was accused of witchcraft and set upon by the society of another. In what seems to have been a favorite method of retaliation, members of an aggrieved group posed as guests or watched until all men of an offending village had left on a hunting trip. Then little packets containing pine tar and fragments of pine needles or dried juniper leaves were tucked around kiva and house beams, where they would not be noticed by the returned inhabitants. Later, a light

touched to one packet caused it to burst into flame much as if the material had been soaked in gasoline. The fire spread from packet to packet and through the kiva rafters so quickly that men inside the kiva were suffocated before they could escape through the hatchway. Many villages are said to have been exterminated thus; the societies of others eventually moved together to form the present pueblo of Jemez.

Another example of Tanoan preoccupation with warfare is their association of their single large "round house"[37] or "big kiva" with scalps and war ceremonies pertaining to magical "power," as well as with affairs involving clowns and other costumed figures. Tanoan leadership in the Pueblo Rebellion of 1680 is well known, and the tale of the Hopi invitation to a Tewa (or more likely Tano)[38] group from the Rio Grande to come over and battle with the Ute enemies in return for First Mesa land attests to the reputation of these people as warriors. We know little of the Tano except that they were closely related to the Tewa, but the similarity of emphasis upon warfare by Tiwa, Tewa, and Towa is marked.

Tewa Pueblos—The pattern of Tewa social organization is best set forth by Bandelier from his vantage point in time; it appears much as we find it today but clearer in lack of disruption. Each village had a double moiety system. The two moieties contained certain parallel societies apart from those lesser societies which cross-cut moiety membership.[39] Religious government lay in the Pato-abu[40] or council of priests, comparable to the Keresan Yaya. The Pato-abu was composed of the Cacique of each moiety, the War Priest or shaman, the Hunt Priest or chief, the leader of the Tzi-hui (which Bandelier equates with the Keresan Cikame Society), and a woman who stood as "Mother"[41] to the group. The leaders of the two clown societies were included in this group by courtesy. The Hunt Society was rapidly disappearing in the late 1800's but the "War Societies" still existed in force. The governor, lieutenant governor, War Captain and lieutenant War Captain were appointed by the Caciques.

Parsons' data on Tewa war societies is scanty but in places suggestive. Her

37 Where two are found there is evidence of heavy borrowing from Keresans, as in Jemez (Florence Hawley, *Big Kivas, Little Kivas, and Moiety Houses in Historic Reconstruction*, Southwestern Journal of Anthropology, vol. 6, pp. 206-303, 1950).

38 Eric Reed, *The Origins of Hano Pueblo* (El Palacio, vol. 50, no. 4, pp. 73-76, 1943); Edward P. Dozier, *Resistance to Acculturation and Assimilation in our Indian Pueblos* (American Anthropologist, vol. 53, pp. 56-65, 1951).

39 Florence Hawley, *An Examination of Problems Basic to Acculturation in the Rio Grande Pueblos* (American Anthropologist, vol. 50, pp. 612-624, 1948).

40 Bandelier, *Final Report*, pp. 305-307.

41 Possibly comparable to the *Mafornin*, "Mothers" of the Kumpas of Isleta.

statement that Nambé associated rain with scalps[42] is footnoted to call attention to the fact that Zuñi (as noted by Stevenson) and apparently all the Pueblos similarly considered scalps efficaceous in rain making. Scalps were hung in the house of the Hunt Chief[43] to protect women being initiated there into the Women's Society. Membership duties included feeding the scalps at certain times. In the Tewa emergence legend the twin war gods and their assistants (two war spirits for each direction) are made responsible for storms.

Men's scalp societies with women's auxiliaries are remembered in all the Tewa pueblos and tales are told of prisoners being taken from Navaho, Apache, and Ute, the traditional enemies.

The two present-day "Outside Chiefs" with their four assistants (comparable to the Keresan War Captains plus assistants) are said to represent the *tow e'* or war spirits, to whom they were expected to make offering of bows and arrows.[44]

Tiwa Pueblos—The Tiwa pueblos are usually grouped into two divisions, Taos and Picuris in the northern and Sandia and Isleta in the southern. Data are almost completely lacking for Picuris and Sandia. Considerable interest in war is apparent in accounts of Taos and Isleta.

Taos—In Taos[45] there is an abandoned kiva, now visited only by racers before a competition but formerly used by the P'iulenoma Society, otherwise known as the Red-painted People because of their custom of using the red paint associated with warriors, weapons, and warfare offerings to the stars. Scalps were kept in this kiva. The members of the P'iulenoma Society were not themselves warriors but they aided the warriors and danced with them. The War Chief always has been head of the Bear Society, related to the P'iulenoma. Parsons suspected that the former was a branch of the latter and used the same kiva until its eventual abandonment, presumably after cessation of all warfare. The Bear People at present are affiliated with the adjacent Water Kiva, and the scalps, which seem to have belonged to the old kiva, now are in Water Kiva.

The only warriors' society of which we have record is a temporary group made up of warriors just returned from battle or of townsmen who ran out and touched a single warrior returning alone with a scalp.

42 Elsie Clews Parsons, *Social Organization of the Tewa* (Memoirs, American Anthropological Association, no. 36, 1929), pp. 138-145.

43 The close relationship of hunters and warriors in religious background and general concepts is shown especially in the old accounts of Zuñi by Cushing and Stevenson. The duties at present ascribed to the Tewa Hunt Chief probably originally were carried by a War Priest, as in Jemez.

44 Parsons, *Social Organization of the Tewa*, p. 272.

45 Elsie Clews Parsons, *Taos Pueblo* (General Series in Anthropology, no. 2, 1936), pp. 21-22, 73, 108-109.

Four days before leaving on a war party, warriors prepared themselves by composing songs, praying, and depositing prayer plumes, pollen, and corn meal at the mountain shrine of the Stone Men, who once were human (Twin War Gods), and of other supernaturals.[46]

A warrior promptly scalped any enemy he had killed, and other warriors ran up to shoot at the corpse. That the war "Chief" was more priest than chief is indicated by the fact that he did not accompany war parties in the field but remained in the kiva singing songs for aid to the warriors. Upon return of a party, the War Chief required a personal report from each and took the scalps to prepare them by stretching and coating with red paint. Each scalp taker was expected to sing the song of his adventure night and morning for four days.

Dancing with the scalps continued for four days under the auspices of the Bear Society.

> The townsmen came out and danced around the scalp, yelping and hollering. . . . The women were not required to dance but they usually did. . . . During the dance the War Chief would stay in the kiva, singing and praying to Earth Mother and to the Sun for strength.[47]

Everyone, and especially the old women, made fun of the scalps and did everything possible to insult them. Parsons was told that scalps were prayed to for fertility, and that when danger threatened the village the scalps gave warning by being noisy.

The secular officers of today, including two War Captains, are selected by a council composed of the Cacique and heads of the kiva groups, among which is counted the town chief.[48]

Isleta—The native Isleta system of officers and government has been disrupted for some years, and Parsons, puzzled over incomplete and conflicting data, suspected that her informants were being secretive.[49] More recent information has clarified the pattern, which shows considerable similarity to that of Taos.[50]

The leader of Isleta was the Town Chief or Cacique. He appointed (or the clan heads appointed—opinion varies) the Kabewhiride or Bow Chief as his

---

46 Parsons, *idem*, p. 108.

47 Parsons, *idem*, p. 23.

48 Harold D. Lasswell, *Collective Autism as a Consequence of Culture Contact: Notes on Religious Training and the Peyote Cult at Taos* (Zeitschrift für Soxialforschung, Jahrgang 4, Heft 2, Paris, 1935), p. 239.

49 Elsie Clews Parsons, *Isleta, New Mexico* (47th Annual Report, Bureau of American Ethnology, pp. 193-466, 1932).

50 Florence Hawley, field notes.

"brother" and advisor, to hold office for life. Bow Chief and Town Chief together acted upon the requests of local dancing groups for permission to give their ceremonies. Neither officer was permitted to do farming or wood chopping; food and clothing were provided by the townspeople for the families of both so that those functionaries could concentrate their thoughts on the good of the village.

Bow Chief had as his assistant the head of the Kumpa society. If Cacique and Bow Chief both were lacking (the last two died within a short time of each other and no one could be found to accept either of their positions), the head Kumpa acted as Cacique, although he could never actually become that officer.[51] The head man of the Kumpa Society was that man who had been a member for the longest period. Beneath him the other men carried their various degrees of seniority; each would take his position as head in exact order should the leader die.

The Kumpa Society is made up of the Kumpas, men, and the Mafornin, women, who have vowed to join if cured of some illness. The function of the Kumpas is to stand guard on all occasions such as war, at time of ceremonies, and for retreats of the medicine men. The Kumpas did some fighting with bows and arrows but apparently were more important in making magic to weaken the enemy, and similarly to weaken the witches when the medicine men went out to capture them. The Kumpas had charge of the scalps which were sealed into the walls of the "round house" or kiva. The Mafornin (known as Mothers of the Kumpas) were the only ones permitted to clean the round house and the Town Chief's house and to feed the scalps. These women chewed the scalps and spat the blood into a bowl. Caliche was mixed with this blood, balls were formed of the clay, and the balls were tied inside a cornhusk and carried home by society members to be given out as medicine (swallowed in water) to persons who were ill or lonely or felt heart weakness—or even to medicine men who wanted power.

In the war dance performed at initiation of members, the men danced in two opposing lines, with two of the Mafornin carrying scalps on poles between the lines. After the various sets of the dance, costumes were removed and men prepared for the ceremonial relay race.

The War Captains of Isleta were elected by general vote upon nomination of a selected candidate for each moiety by a representative of one of the corn groups, linked ceremonial but not exogamous clans. The War Captains appointed

51 In Pueblo concept a man may carry the duties of some office but never *becomes* that officer unless he has been properly chosen from the group and has the requisite ceremony performed over him by the persons responsible for such ceremony.

their own assistants. The War Captains were said to be brothers of the Kumpas: "they all use bow and arrow." Their duties were about the same as in the other pueblos; they collected food for the Town and Bow Chiefs, guarded ceremonies, punished witches, and carried to the Town Chief the petitions of the various societies planning to give ceremonies.

Parsons reported a Scalp Takers Society, with only three members still alive. "Their function is in connection with the sporadically performed war ceremony, when they lead the war party and for four weeks take care of the scalps."[52] This group, no longer existent, presumably represented the more active field fighters. The Kumpas were the ceremonial group responsible for providing them with magical power and protection.

It is apparent that Keresans and Tanoans both recognized warfare as a part of existence, relied on the aid of religion as well as arms in their expeditions, and honored the returned warriors and the scalps through considering both as rain makers. Village organization for both Keresan and Tanoan villages, although differing in detail of pattern may be summarized as having consisted of a Cacique (or two in the Tewa system); a War Priest (head of the Warriors Society) of the same approximate importance; two War Captains who were expected to direct forays in the field, act as executives for the two presiding priests, and be responsible for certain religious duties; and a council composed of the heads of all the religious organizations of the pueblo. Warriors and war officers were primarily concerned with protection of the village from human and supernatural enemies but all carrying other important functions far removed from war even while utilizing the power derived within the war complex. Did Hopi and Zuñi likewise follow this pattern or was the war complex peculiar to the more eastern villages?

Zuñi government[53] consists of a hierarchy composed of the six rain priests representing the six directions (including the Pekwin: House Chief and leader of the rain priesthood of the Zenith, deputy to the Sun Father),[54] the two Bow Priests functioning as earthly representatives of the twin war gods, and (at least formerly) "a priestess of fecundity" who has not been identified in reports dealing with the recent period. Installation of the Bow Priests is conducted by the Pekwin in her house. Elder Brother Bow Priest is selected by the Rain Priest of the North after consultation with others of the hierarchy, although the one who has

52 Parsons, *Isleta, New Mexico*, p. 260.

53 Matilda Cox Stevenson, *The Zuñi Indians, Their Mythology, Esoteric Fraternities, and Ceremonies* (23rd Annual Report, Bureau of American Ethnology, 1901).

54 *Idem*, p. 165.

been serving as Younger Brother Bow Priest customarily is put into that position "unless some other member of the organization has become more famous in war when his scalp trophies win for him the highest honors conferred on any member of the body."[55] Elder Brother Bow Priest prays to the Sun Father for a good heart so that "his prayers for the welfare of his people may be heard and he prays to the Gods of War to intercede with the Sun Father and Kok'ko A'wan [Council of the Gods] to send rains."[56] Younger Brother Bow Priest is chosen by Elder Brother from the Bow Priesthood and the same initiation ceremony is repeated. "The Bow Priesthood, having to do more especially with the lightning-makers, communicating usually directly with them, and not through other gods, is differentiated from other fraternities."[57] To become a member of this group, organized by the twin war gods after the settling of Zuñi, the warrior must have brought back the scalp and a piece of the buckskin clothing of the enemy he had killed. In Stevenson's day, with warfare prohibited, members of this society were recruited by Elder Brother's occasionally selecting a suitable man and arranging his initiation in imitation of the return of a victorious war party. Ceremonies were elaborate. The supposedly returning warrior, with a member of the Bow Priesthood chosen as his sponsor, stopped on the outskirts of the village to deposit two olive shells and two short strings of beads at the apex of the first ant hill encountered near the village, while they prayed to the Sun Father, the Beast Gods, and the Rainmaker Bow Priests[58] (Twin War Gods). Variations of this ceremony recurred during the twelve-days celebration. An old scalp, taken from the scalp house, was kicked into the village by two matrilineal and two patrilineal aunts of the warrior.

While the scalps were being kicked into the village, the onlookers whooped and shot off guns. "If the mere dramatization produces such frenzy, what must have been the scenes when the victor returned from battle with scalps of the hated Navaho!" comments Mrs Stevenson.[59] Old and young engaged in the scalp dance repeated for twelve successive nights around the scalp pole in the plaza, although the warrior, his sponsor, and the scalp kickers went into retreat for four days.

On the fifth day two groups of singers, chosen to serve for life as choirs for the two War Gods, furnished songs for girls who danced, successively, in pairs,

55 *Idem*, p. 577.
56 *Idem*, p. 578.
57 *Idem*, p. 577.
58 *Idem*, pp. 578-585.
59 *Idem*, p. 582.

upon two rectangular wooden slabs (foot drums)[60] laid into the floor at opposite ends of the long chamber of the Bow Priesthood. Further dancing by various groups and of various types, including rain dances, continued in the plaza and in certain ceremonial houses. Wooden images of the war gods, carved anew for each occasion by special men and almost covered with prayer plumes made by the rain priests, were deposited in their respective mountain shrines. Similar images were (and still are) carved and set into these shrines at the time of the Shalako, the Winter Solstice Ceremony. The annual ceremony of the Bow Priesthood, the October Harvest Dance, no longer is given.

Cushing's discussion of the the fetishes of the Bow Priesthood[61] adds to our understanding of the relationship of the Bow Priests and the Pekwin or Sun Priest in charge of their ceremonies to the supernatural pantheon. These fetishes consist of the mountain lion, the white bear, and the Knife-Wing man, whose weapons are the great flint knife, the rainbow of the skies, and lightning arrows. Such images, like the fetishes of the Hunt Society, are fed by being dipped in the blood of a slain enemy or a slain animal. The Knife-Wing man (Knife Feathered Demon) was thought by Cushing to be "the original War God of the Zuñis, although now secondary, in the order of war to the two children of the Sun. . . ." He is also referred to as Tatadios (Spanish: Father God) who lives in the center of the sky, the personification of the sky or sun and often represented as an eagle, symbol of the Above. The Sun or Sky spirit is father, as the earth is mother, of all the people, animals, and spirits.[62] He is depicted with spread arms or wings from which hang knives or lightning lines; he wears a terraced cloud cap.[63] Deceased members of the Bow Priesthood are thought to become lightning makers, "mighty warriors who control the lightning arrows."[64]

With this detail we are left in no doubt but that Cushing was correct in considering the Knife-Wing Man or Sun Father as principal war deity; his sons, the Twin War Gods or Ahayuta, were his active emissaries, as in the Rio Grande.

60 Eight feet by fifteen inches in size. Abel (ms., 1951) suggests that the floor cysts of the great Chaco-type kivas and of some of the smaller kivas were roofed with planks for similar usage, as Roberts suggested for the Village of the Great Kivas on the basis of similar structures in modern Acoma kivas (Frank H. H. Roberts, Jr., *The Village of the Great Kivas on the Zuñi Reservation, New Mexico*, Bulletin, Bureau of American Ethnology, no. 111, 1932), p. 59.

61 Frank Hamilton Cushing, *Zuñi Fetishes* (2nd Annual Report, Bureau of [American] Ethnology, 1883), pp. 40-43.

62 Florence Hawley, field notes.

63 See designs on shield of Priesthood of the Bow in Zuñi (Cushing, *Zuñi Fetishes*, pl. 11). The "Great God" or Sky God represented on the walls of the Laguna colonists' ceremonial chamber in Isleta likewise wears a terraced cloud cap and carries bow, arrows, and knife (Florence Hawley, field notes).

64 Stevenson, *The Zuñi Indians*, pp. 20-21.

On an earthly plane which parallels that of the supernaturals, the Zuñi Pekwin, known as the Sun Priest, now comes to be seen as a parallel to the War Priest of the Rio Grande villages and not, as commonly supposed, a counterpart of the Rio Grande Cacique. His direction of the ceremony for the returning warriors and of the following lengthy period of related war-scalp-rain dances reflects his position. That he is not one with the other Zuñi Rain Priests in indicated in his having neither water fetish nor the customary corps of associates.

The Zuñi war complex is even more elaborate than that of eastern villages: it has been summarized here in some detail because Stevenson's early studies were based on much more information than has been available in the field to modern anthropologists. The Zuñi system differs from the eastern complexes in that the War Priest or Pekwin—in the east usually a member of the Flint Society—stands as House Chief paternally and deals with the "inside" problems of the pueblo, thus combining the functions of Cacique and War Chief. It parallels the eastern system in that the head Bow Priest, leader of the Warrior Society and representative of the older of the Twin War Gods, is active executive and deals with "outside" affairs, primarily those of actual physical protection. The position of Cacique as seen in the more eastern pueblos does not exist in Zuñi. The Zuñi council, composed of the heads of religious organizations parallels that to the east, except that Zuñi excludes leaders of the curing societies.

And the Hopis? These westerners were those to whom the term of "Peaceful People" was most commonly applied. Their invitation to the Tano group to come and help fight their battles and then to settle beside them is a matter of history. Their social organization of the early period was never clearly set forth by the anthropologists who wrote so lengthily of their ceremonies, pottery, etc., but we know that at present the leaders of the various clans make up a council which is responsible for both religious and secular programs of a single pueblo. The Village or House Chief must be selected from a specific family of a specific clan in a village; he keeps the *tiponi* or most sacred fetish of the religious society associated with that clan.[65] He is supposed to be in close contact with the cloud people who control rain. When he is put into his life-long office by the head of the Agave Society he is told,

> Now I make you a chief . . . and now I give you a good path to lead us to the Sun. Now you are our father. Look forward for the good and not for the bad, and see that things go rightly so that we may have good crops and long life.

65 Mischa Titiev, *Old Oraibi, a Study of the Hopi Indians of the Third Mesa* (Papers, Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. 22, no. 1, 1944), pp. 63-66.

He is considered to be the father of his people and must maintain a paternal attitude.

To his prayers they attribute the success or failure of their crops and so great is his responsibility for the health and welfare of his subjects that no matter how little part he plays in the active business of governing, the cares of the Village chief are by no means light. . . . On the whole, the Village chief is looked upon rather as a guide and an adviser than an executive; and as an interpreter of Hopi tradition rather than as a legislator.

Except for the Village Chief and the War Chief, says Tietiev, the duties of clan chiefs (each head of a religious society) are largely limited to their own groups, although all meet in council for discussion of community problems. The War Chief patrols the village late each night; he also punishes or threatens to punish offenders against customs of village propriety.

He was the nearest approach to a policeman in each Hopi town. . . . The basis of his authority lay in his military leadership, for to those who misbehaved he would say, "Very well, you think you are showing yourself to be a brave man by acting this way. Well, in the next battle you can show what a man you are by taking my place at the head of the warriors and fighting as I do." Since the War Chief led his men into action with no other weapon than a stone axe, his threat was not lightly regarded. With the abandonment of native warfare, the power of the War Chief has diminished until his position today is entirely devoted to ceremonial observances.

This pattern of Village Chief and War Chief as dual leaders, supplemented by a council composed of leaders of all the other religious groups largely parallels that of the native Keresan system, although in the loose organization of Hopi these two officers do not stand out as in the tight Keresan pattern.

In 1944[66] Linton, mentioning that Pueblo folklore and Pueblo behavior during the Spanish period led to doubts concerning this group's proverbial peaceful nature, pointed out the possible fallacies of attributing the defense characteristics of prehistoric Southwestern sites primarily to fear of nomadic raids and battles. He suggested that towers and fortifications may reflect inter-pueblo strife, a thesis which Schulman since[67] has developed to convincing clarity. The Pueblos, Linton argues, were using almost all the arable land available. Only a thin and scattered population of seed gatherers and small game hunters,

66 Ralph Linton, *Nomad Raids and Fortified Pueblos* (American Antiquity, vol. 10, pp. 28-33, 1944); H. M. Wormington, *Prehistoric Indians of the Southwest* (Colorado Museum of Natural History, Popular Series, no. 7, 1947).

67 A. Schulman, *Pre-Columbian Towers in the Southwest* (American Antiquity, vol. 15, no. 4, 1950).

living in widely dispersed family groups, could have subsisted in the arid peripheries and, before the advent of the horse, would have little time, resources, or mobility to devote to appreciable depredations upon any large and economically stable agricultural population entrenched in the area.

It is improbable that such food gatherers were warlike and still more improbable that they could have developed the sort of coördination and internal organization necessary to assemble and provision war parties of a size which would constitute a serious threat to most Pueblo III settlements. Thus the Mesa Verde, with its conservatively estimated population of 5000, should have been able to put 700-800 fighting men in the field. It seems unlikely that there were that many nomad warriors within a five hundred mile radius of the Mesa Verde, even though this settlement lay near the northern limit of the Anasazi territory. . . . The essence of the Old World nomad raid was its swiftness in attack and retreat, made possible by the use of cavalry. The American nomad raider had to come and go on foot, and the Anasazi warriors, numerous and fresh from the village, must have been formidable in pursuit as well as in defense. . . . If nomad raids were frequent and serious, it stands to reason that at least some nomad warriors would have fallen before the walls of fortress pueblos or been captured and done to death within them. As far as the writer can discover, no skeletal remains which would support the nomad invasion theory have so far come to light. There have been numerous finds of victims of violence, often interred with scant ceremony, but all of these have been of the ordinary Anasazi physical type. Their presence suggest neighborhood brawls rather than foreign invasions.[68]

Linton's alternative suggestion to account for pueblo defenses is bickering, to which we know the Pueblos were subject, and competition for good farm lands, especially after the Pueblo culture had grown to cover most of the Southwest not occupied by Hohokam and Mogollon peoples. Depletion of farm lands through repetitious and non-scientific usage would magnify the problem. Droughts would further increase the envy of pueblos on marginal lands against those located near good water supplies. To people oriented on a basis of magic-religion in relation to weather and fertility such problems would appear to be deeply related to the magical "power" concept and probably would result in accusations of witchcraft, etc. Even among the Hopi of today, these matters are basis for long recriminatory orations in council meetings.

SUMMARY AND CONCLUSIONS

In our present study Bandelier has been considerably quoted in relation to the eastern pueblos because he worked with informants in a period appreciably

68 Linton, *Nomad Raids*, pp. 29-30.

closer to their past history and aboriginal culture than we of today.[69] He was first to recognize the considerable existence of inter-pueblo warfare in this area as a pattern:

> Political autonomy of each pueblo—even complete independence from its nearest neighbor of the same stock, to such a degree that it led not infrequently to hostilities—was the condition of the Pueblos when the Spaniards first visited them, and it remains thus to the present day, with the difference that intertribal warfare was not further tolerated as soon as the villagers became subjects of the King of Spain. . . .[70] If the tacit agreement that still to-day prevails among the Pueblos is reminiscent of olden times, as I have good reasons to suppose, then, in case any village begged of another military assistance, and it was granted, the war captain of the first one was *ex officio* commander in chief of the campaign. In case of absolute necessity tribes of distinct idioms called upon each other for aid, and the instances are not rare where two villages of the same language quarreled, and one turned to another of another stock to help him against their kinsmen.[71]

Elsewhere he mentions the series of ruined villages north of Cochiti claimed by the Keres as former homes. "They attributed this gradual southerly movement . . . to the persistent hostility of their northern neighbors, the Tehuas."[72]

The Pueblos seem to have combined forces more completely than ever previously in driving out the Spaniards during the Revolt of 1680, although the Piros were not invited to participate; but when de Vargas returned to New Mexico in 1693 he found all inter-pueblo unity disrupted. The people of Cochiti (Keres) and San Marcos (Tano) had retreated to rebellious security on top of the Potrero, whence they threatened the people of San Felipe (Keres) for new loyalty to the Spaniards. By the beginning of 1694, as Bandelier summarizes,

> . . . hostilities had commenced in every direction. The pueblos of San Felipe, Cia, and Santa Ana [all Keres] were clamoring to Vargas for assistance against the Jemez [Towa], the Queres of Santo Domingo, who had joined them, the people of the Potrero Viejo [Keres].[73]

It is frequently stated that if the Pueblos of New Mexico had merely united forces in opposition to the Spanish invaders rather than continuing to indulge

---

69 Although occasional items of his data on social organization are recognizably in error, as he suspected might be seen when more detailed work should win over the difficulties of Eastern Pueblo secrecy, his generalized systems are clear.

70 Bandelier, *Final Report*, p. 137.

71 *Idem*, p. 139.

72 Bandelier, *Final Report, Pt. II* (1892), p. 165.

73 *Idem*, p. 172-173. Parenthetical additions by the author.

in petty internecine strife and jealous enmities, European supremacy in the Southwest could have been long delayed. But such was not their tradition.

It might be absurd to equate the Pueblos with the Navaho-Apache or with the Plains tribes in emphasis upon warfare after the horse was introduced. But it is obvious that the Pueblos were not without interest in the matter, apart from the occasional actual necessity of self protection from marauders. The ancestors of the Pueblos, before accepting a sedentary agricultural life, necessarily had been nomadic hunters and gatherers and possibly more or less war-like in cultural orientation. This would leave a tradition of war and a type of leadership-authority pattern which could develop, under the elaborate organization characteristic of their wealthy agricultural period, into the hierarchy controlling a tribe or village, in a manner parallel to that conceived for the supernatural hierarchy of deific individuals. From the latter their earthly counterparts obtained "power" in return for priestly services rendered. The individual who filled each office did not matter except that he must be of good heart and devoted to his duties; the "power" which he could call upon and which he represented came from the deity and was symbolized in the fetish which was handed down from officer to officer, as an ultra-sacred object for him to utilize, to care for, and to guard. The concept, of course, is that long recognized in the relationship of medicine men (members of curing societies) to the beast gods, who instructed certain groups in their esoteric lore before leaving their original abode with the people for their present homes at the edges of the world.

Whether the structure of warfare actually dates to a pre-pueblo period we cannot say. In historic times, as in our own government, cabinet members whose chief function appeared to be war actually carried a number of other duties related by extension of the concept of group protection. Such protection, in the pueblos, included obtaining the aid of appropriate beneficent supernaturals and punishment and routing of such malificent spirits as witches.

We can, in the light of recent accumulating data concerning the warlike tendencies of pueblo against pueblo, debate whether actual enemies were more frequently Navaho-Apache and other semi-nomadic or rancheria peoples or, instead, merely Pueblo groups of other or even the same linguistic background. Beyond protection, warfare served to provide legitimate outlet for the frustrations and aggressions arising from unpermitted competition or suspicions thereof among peoples of the same general culture. Warfare, moreover, was something of a sport as well as an occasional necessity; it was considered to be related to racing and, in the wholeness of concept typical of Pueblo culture, to fertility and rain. Very few scalps seem ever to have been taken at a time: battle losses among

the Southwestern tribes rarely appear to have been heavy, a situation which permitted war activities to be contemplated with more pleasurable excitement than horror.

The data, though scattered and attenuated by the four centuries since the Spaniards prohibited Pueblo warfare and the one since the United States definitely put an end to forays, is sufficient in amount and in detail to indicate that in each New Mexico village except Zuñi there was a priest of fertility and general good, whom the Spaniards called the Cacique, plus a priest of war and general protection. These two led the village hierarchy (two Caciques divided their duties on a half-year basis in the Tewa moiety system), the Cacique representing Mother Earth and being referred to as "Mother" in a number of the older ethnological reports, and the War Priest representing the Sun Father. In Zuñi the Pekwin was War Priest; there appears to have been no priest representing Mother Earth as such, although the "Priestess of Fecundity" may have carried a partially parallel position. The functions of the Pekwin included those of being "House Chief." The Keresan War Chief seems to have been primarily a priest. The War Priest seems to have been expected to lead in the field, but in general his contribution was that of religio-magic, while his subsidiaries, the two War Captains, representing the twin war gods, were the active war leaders as well as the semi-religious police force and village executives in general—just as the Morning and the Evening Star were the executives for the heavenly hierarchy. Warfare seems to have been more the theme of a cult among the Tanoans than the Keresans, and war-like tendencies as well as manifestations of leadership have been the more evident among Tanoan groups in historic times. Similarities of associated traits in the complex between the different linguistic groups is simply enough explained on the basis of diffusion such as occurred in providing the general distribution of basic traits in the katcina cult, the medicine cult, and the weather-fertility cult, although details within each vary from group to group. The relating of certain religious societies to that of the warriors, for aid, parallels the usual Pueblo pattern of certain societies coöperating toward specific ends. Similarly the warriors themselves were expected to turn their "power" toward weather control, etc., by means of fasting, continence, and ceremonies so exacting that the veterans returning after this last war refused to join and thus revive the defunct Warriors societies, to the sad consternation of the conservative elders.

Farming people, finding coöperation necessary in the material and religious requirements of crop-raising, tried to protect themselves from disintegration arising from the jealousies of competition and open expression of personal aggression by prohibition of competition and by training against aggressiveness.

That these mores were not entirely successful is shown by the splits historically known. Competition for lands, although occasionally existent, appears to have been of minor importance. The frustration and envy arising when the *appearance* of non-conformity or of competition arose from such accidental matters as unusual success in hunting, weather control, etc., became the more irritating in presumably being transgressions of social prohibition. Capitol punishment of the apparent crimes, whether within one's own pueblo or in a neighboring village became a sacred duty but at the same time served to dispose of accumulations of frustrations. The "peaceful pueblos" became the more peaceful through socially channelizing and making use of the urge toward aggression.

University of New Mexico
Albuquerque, New Mexico

CULTURE: ITS EMPIRICAL AND NON-EMPIRICAL CHARACTER[1]

CORNELIUS OSGOOD

INTRODUCTION

IN A VOLUME on a group of Athapaskan-speaking Indians in Alaska I presented a conceptual system for viewing culture.[2] The statement was the outcome of an effort to clarify my own thinking with regard to culture and to record the theoretical basis of a specific approach to problems of ethnology. That the presentation was succinct and not explicit cannot be denied. It was by no means certain that my point of view might have any value except to serve as an introduction to the work which followed. No doubt has existed in my mind, however, that an effort on the part of scholars to verbalize the general philosophic premises from which they operate would be highly rewarding. This view, it seems, is particularly pertinent to a discipline such as anthropology which has vibrant roots in the diverse fields of arts and sciences with creepers extending to intertwine among all the manifestations of human thought. In holding this opinion, I have been impelled to demonstrate it in practice, though reluctant to stir the quiescent animosity which may be excited by even the mere mention of the word metaphysics. Certainly metaphysics, with the meaning in which it may be considered important to anthropologists, is a harmless guide against certain types of confusion. Metaphysics in the restricted, or ontological sense, pertains to the nature of being. It raises the question of what is to be considered as reality, or in other words, what is to be regarded as existing as an actuality or entity in a universe in which we speak of time and space, of idea and matter. It serves to distinguish for us that the materialists believe that only matter actually exists and contrasts for example the position of the idealists who hold that mind alone is the true reality. We may wisely leave the question of why these views are held and the problems of their logical consistency to the philosophers, but a simple awareness of these postulates has a practical significance for social science. If for example, we find the statement "Custom dictates the development of society," it may be followed by a long treatise defending this notion coherently with

1 This paper was completed during the winter of 1940-41, and no emendation has been necessary to bring it into accord with the writer's present view of culture.

2 Cornelius Osgood, *Ingalik Material Culture* (Yale University Publications in Anthropology, no. 22, 1940), pp. 25-29.

scarcely a reference to perceivable matter which compose the "facts" of the materialists. The materialistic anthropologist may with bad grace consider the result as so much nonsense, or with more charity regard the statements as unfounded hypothesis, or perhaps with complete naïvete assume the existence of the supporting "facts." Actually the writer may be an idealist who is perfectly content with the existence (or technically speaking, subsistence) of his ideas as he states them. They are the "facts." Furthermore he is apt to see no sense in undertaking perceptory examinations to gain further stimulation if he has enough ideas to manipulate without doing so. Field workers, for him, are essentially technicians who bring some increment of ideas with which to work. Now certainly since the anthropologist seems to be interested in "facts," this is a significant situation. He must know what is meant when someone speaks of "facts" and the ability to distinguish lies in metaphysical sophistication. Even more troublesome confusion comes when someone who even subconsciously has no consistent basis of metaphysics essays to present "facts." In such cases various kinds of "facts" are jumbled together to be accepted by the avid but careless researcher in his hour of need. Also it is certainly impossible to present explicitly, or to understand, a specific conception of culture without recognizing the metaphysical premises involved.

Finally there is the question of what is meant by the truth of facts. Epistemology must be distinguished from metaphysics but inevitably one's appreciation of a particular theory of truth will be keener if seen against the metaphysical background. One will learn not to expect empiricism as an ultimate criterion of truth from an absolute idealist though one may do well to seek him out if one wishes to learn the fine art of logically coherent thinking.[3] Perhaps my case is not yet clear but I shall try to do what, if done by others, would make my understanding of their work immeasurably more simple.

In this paper I shall attempt to set forth my theory of culture explicitly. I shall indicate my general metaphysical position and then lead on to an epistemological view of culture which to the degree it is empirical should be readily acceptable to the scientific coterie among my colleagues after adaptation to whatever variety of implicit metaphysics they may hold. In my effort to achieve simplicity I shall make what are inevitably commonplace statements of general knowledge. I am quite aware that they are widely known and in themselves no contribution to the sophisticated thinker. Little harm should come from their

3 It is, of course, recognized that an idealist will acknowledge empirical judgments but will tend in the last analysis to regard the coherence of ideas as the criterion of their truth.

repetition. If I am able to present an idea less frequently verbalized, I must ask indulgence for complexity since one cannot express with simplicity except what we agree is common sense, and of that there is sure to be some difference of opinion.

THE CONCEPTION OF CULTURE

In my previous work I began by pointing out that I could conceive of the data of culture as being no more than the ideas in any one person's mind. I came to this conclusion by thinking of what I really meant when I referred to culture in the broadest terms. Culture for me seemed obviously to be all the ideas of which I was conscious about a certain subject. At least if I wrote a paper pertaining to culture, I could not see how I could express anything else except the ideas in my mind. Furthermore I did not see, nor do I now, how anyone else could be in a different situation in regard to this matter. Such is my philosophical persuasion. I did recognize, however, that the term might be defined to include all the ideas of all individuals on the subject. Such a conception can hardly be denied as being an abstraction of the grandest order. When I use the term in that sense it is like pronouncing a word and saying, "Let this stand as a symbol for something I cannot think about as a whole," for after I subtract the ideas about culture which I have in my own mind, there is nothing left, and I cannot think about nothing although I recognize the word as a useful symbol. I wished to define my subject in terms of what I can think about so I was content to leave the grand abstraction to less practical speculators.

I was also aware that culture is a word which is frequently applied to objects of thought considered as external to an ego's mind. Probably this viewpoint of metaphysical materialism or dualism is the most common usage of all. For example, if Eskimos dance together, their behavior will be called a part of culture. In other words, the culture is not any individual's ideas of the dance, it is the thing in itself, and apparently would still be culture whether anyone had an idea of it or not. To be consistent it would seem that if an Eskimo made a kaiak, then the kaiak itself would be a part of culture, and if he had an idea of the supernatural being Sedna living under the sea, then that idea in the mind of the Eskimo would in itself be culture. I must admit this is a very enticing conception of the matter. It suggests great objectivity. It allows for an ego to withdraw with so much modesty that he practically eliminates himself in viewing the universe. The ethnologist can go right on recording data and more data until the libraries are bulging with it. He can fill up museums with it to gaze on in odd moments. Certainly this is a collector's conception of culture.

In any event if these things are considered as culture, it seems that the majority of those who hold this conception will be found among the archaeologists and specialists in material culture, although they are extremely common in other branches of anthropology. Anyone who confines his work to concrete materials should find the conception quite adequate. His data is all before him and he can expect to be disturbed by few skeptics. If he has a collection gathered or excavated in a certain locality, he can refer to the collection as the culture of the locality or area. This seems to me understandable and consistent. Unfortunately perhaps, there is too often a protest at such a delimitation by the materialists or dualists themselves. The collection, it is said, is only a representation of the culture which in its entirety should include a lot of specimens still in the ground or otherwise unseen. Now it is impossible for me to consider this elaboration of the concept except upon the assumption of a whole or totality which goes beyond the empirical evidence. Either one begins with known particulars and hypothesizes a whole of which the particulars so far known constitute but a part, or else one begins with a whole postulated as a reality which one then proceeds to describe in terms of a known part. To the first position I have no objection in theory, but claim that the anthropologists who hold it are seldom consistent in practice especially when dealing with research other than their own. An archaeologist, for example, who seems extremely cautious in making statements about the Eskimo, particularizing his data to certain individual materials of some group which has been geographically and historically distinguished, will suddenly in a discussion of some other area begin to make sweeping statements of "fact" completely ignoring the role of hypothesis.

The fallacy in the second position is found more commonly among ethnologists and sociologists. An ethnologist, for example, may assume the reality of a conception of the Eskimo as a whole and attempt to verify this conception by his reference to a particular segment which has been perceived. This position is obviously less empirical than the former since it begins with *a priori* assumptions as to the nature of the whole. Should I have the temerity to raise the question of the truth of statements made by the ethnologist, I am not unprepared for the accusation that I am stupidly contradicting real "facts." Some particulars may be wrong, I am told, but with regard to the whole, it is a waste of time to discuss the question. Further, it is not a personal matter, since the ethnologist's ideas are only a reflection of what is real. He is defending reality, whereas I am attacking him. I withdraw, profoundly impressed by the necessity for demanding vigorous epistemological standards in anthropology.

THE DEFINITION OF CULTURE

In considering culture epistemologically our purpose essentially is to determine the scope and limitations of our subject from the viewpoint of the truth or validity of our knowledge. In other words we wish to define as precisely as possible what our data consist of and then to develop a method of categorizing the data according to clearly distinguishable judgments of truth. In proceeding to this end I should like first to present a definition of a conception of culture previously published in a volume on the Ingalik Indians: *Culture consists of all ideas concerning human beings which have been communicated to one's mind and of which one is conscious.*[4] This statement does not seem to have been sufficiently explicit and I should like to clarify it in order that one may easily understand the full meaning. We should agree at this point that insofar as we are to discuss *culture,* we must, at least for that purpose, share a single conception of the meaning of the term. Later, if the conception lacks a sound philosophical basis or does not prove practical, it may be discarded for some more satisfactory notion.

The first question that might be raised with respect to the definition is what is meant by the word *concerning* in the statement *culture consists of all ideas concerning human beings. . . .* Here one can be more explicit by substituting a few words so that we have *culture consists of all ideas of the manufactures, behavior, and ideas of human beings.* One might think the addition has considerably restricted the scope of the original statement but it appears demonstrable that this is not the case. The change has simply delimited the meaning by greater conciseness. Supposing someone says, "I know the world is round"—is that an idea *of* human beings? My answer would be that it certainly is unless claimed as an original notion not shared by others. If you have this idea of the world being round and stop to think about it you must realize that you learned it from some human being and probably when you first acquired the information, you felt it to be very peculiar to some people, just as you would feel if an Indian told you for the first time that the north side of a tree is harder than the south. Some further clarity may be gained by emphasizing the fact that in using the word *ideas* twice in the definition, each with a different reference, we are dealing with ideas relating to the minds of two or more individuals of which the first is of necessity the investigator or ego, in whose mind culture subsists. Both references cannot be considered independent of the investigator. The second use of the word refers to the ideas in the minds of all other individuals known to the investigator or ego. It is not meant that ego has ideas concerning other individual's

4 Osgood, *Ingalik Material Culture,* p. 25.

ideas in the sense of a commentary upon them but that ego has ideas which correspond to or agree with the ideas conceived as subsisting in the minds of other individuals. Thus paradoxically, culture which for me subsists only in my mind consists of no connotative[5] ideas except those which are conceived of as subsisting in the minds of others.

While considering ego references, it may prove valuable to sharpen our focus on to an arbitrary and purely quantitative segment of culture in order to see how such particularization affects our thinking. Let us consider some Indians who live in the little village of Anvik on the lower Yukon River in Alaska. About these people a considerable quantity of data concerning their manufactures, their behavior, and their ideas are available. All this information one can refer to as the culture of a specific group. Now how do I derive this dependent notion of culture of a specific group? Logically, with the definition given, the cultural entity is only a division of my culture. I arrive at the notion of the specific group by contrasting this unit of my ideas with the ideas I have about the group into which I have been born and whose behavior and manufactures, as well as ideas, I share. Since I have shared the latter longer and they form a larger quantitative whole, I speak of the former as alien or exotic.

Next, in returning to the definition, one might ask what is meant by *human beings*. For one trying to be concrete, I must admit that here I have made a statement open to an interpretation that would certainly be an abstraction. In this case a numerical extension of individuals was meant, so perhaps there will be no misunderstanding if we substitute the *aggregate of human beings*. Thus in conformity with the previous statement in regard to particulars and wholes, I here maintain that one's knowledge of human beings must develop through an understanding of aggregates of specific individuals rather than on an *a priori* conception of humanity as a whole. Now we have: *Culture consists of all ideas of the manufactures, behavior, and ideas of the aggregate of human beings which have been communicated to one's mind and of which one is conscious.*

Perhaps someone will wonder what is meant by *communicated*. This word has been used to express the notion that culture is acquired. Since "communicated" more directly suggests ideas than behavior or manufactures, clarity may be achieved by adding "directly observed" to the definition. Also it should be made clear that it follows that an original idea, act, or manufacture on the part of the ego in whose mind culture exists does not constitute a segment of culture until it is communicated to or directly observed by another ego—that is to say, culture

5 In other words, with reference to mental culture, my ideas are always the ideas of others.

refers to something shared by two or more human beings, whether the investigator and the informant or two other individuals.

Finally there is the word *conscious* in the definition by which I am including as culture only those ideas of which the investigator is conscious. I do not here deny the existence of the unconscious as applied to particular individuals, but that to be culture it must be referable to consciousness in the mind of the investigator. This is another point of difference from the view held by the epistemological realist who may speak of culture as consisting of unconscious as well as conscious ideas.[6] To conclude with the definition we can now state: *Culture consists of all ideas of the manufactures, behavior, and ideas of the aggregate of human begings which have been directly observed or communicated to one's mind and of which one is conscious.*

Before leaving the question of the definition as a whole, we might take cognizance in passing of several other points. One is that some anthropologists prefer to exclude human manufactures from their conception of culture. Conversely some anthropologists, and particularly some among those specializing in archaeology, think of culture almost exclusively in terms of human manufactures. In adopting the all-inclusive view, we might hope that we are championing a tolerance which will move toward a greater unity for all concerned.

So far we have concluded with defining a conception of culture. It should also be made clear that we have not been concerned with simply defining the word "culture" after disputation or study of its established usage. In such matters we can defer completely to the etymologist, or etymologically-minded anthropologist, and if he demonstrates some other term to be more appropriate to the speech pattern of social scientists, let us not hesitate to substitute the word suggested. In a sense, we can regard the utilization of the term "culture" as an afterthought. We have been concerned with the formulation of a conception of the data of anthropology as a whole and, merely with some regard for current usage, named that whole, "culture."

EPISTEMOLOGY

Now let us turn to the fundamentals of the epistemological problem. We can refer to knowledge as the totality of our ideas. Scholars, however, are primarily concerned with the question of truth with regard to knowledge. The nature of truth viewed as a whole is a fascinating matter but we will probably

6 Since culture for the realist pertains to individuals independent of the investigator's mind, the former therefore may regard culture as consisting of those individuals' conscious and unconscious ideas.

not be over-modest in restricting our consideration of it to some generally accepted distinctions. When we look over the field of anthropology we note that the empirical and non-empirical traditions are fairly evenly matched. It is in this respect as a discipline that anthropology falls between the arts and sciences. When one reads in the field of the majority of the sciences, one expects an empirical standard of truth in regard to the data. In the arts this is not so. In the social sciences one must be prepared for confusion, which to say the least, is an uneconomical situation. This difficulty can be overcome only by categorizing the data by means of distinctions based upon recognized standards of truth.

In approaching this problem, we can reasonably begin by proposing a theory of culture which is epistemological, that is, one which makes a primary division of the data into classes, each distinguished by a variety of truth. The theory proposed distinguishes two classes, a first which satisfies an empirical standard of truth and a second which does not. Here we may pause for a moment to state how we are using the term empiricism. Let us define our concept of empiricism to be the truth of agreement of conformity between an idea and an object or objects which are perceived. Put into less technical terms, ideas acquired directly by observation or experiment are empirically true. Certainly there is nothing novel about such a distinction in evaluating data.

When we examine publications in anthropology today we find certain general classifications to be common. Papers, or sections of monographs, appear under such labels, for example, as material culture, social culture, and to a lesser degree intellectual or mental culture. Under each of these headings are likely to be collected (1) those ideas or opinions of the investigator originating independently of any specific segment of culture such as that of the Eskimo which happens to have been set off for study, (2) those ideas which are presented as the Eskimo's whether empirically verifiable by the Eskimo himself or not, as well as (3) descriptions of perceived behavior or manufactures of the Eskimo. In other words, these labels indicate the purpose or intention of the writer to focus on a certain aspect of his subject without introducing any more question of the quality of truth in the facts he is offering than may be indicated by a knowledge of the prevailing practice of specialists in these several interests. It appears to me that it is possible to have these labels stand as verbal symbols for conceptions which would efficiently indicate at the same time both the subject of the matter and its quality in epistemological terms. This would sharpen the outlines of the subject as well as simplify judgments of value.

To achieve this end we can divide culture into two categories, ideas which result directly from perception, and those which are conceived. In other words,

we shall have two objects of thought. An object which is perceived we can call a perceptum and an object which is conceived we can call a conceptum. Now if we return to the definition of culture we note that it deals with "manufactures, behavior, and ideas." Certainly manufactures and behavior can be perceived, or if there be any doubt about it, let us say that only what is perceived of manufactures and behavior shall be set aside as one category of culture. As for the ideas which people have, these cannot be directly perceived and must be considered as being conceived of by others. Thus we can say that *the manufactures and behavior of the aggregate of human beings which have been directly observed are the percepta of culture, while the ideas of the aggregate of human beings which have been communicated are the concepta of culture.* This distinction, you will note, gives us one category which is truth from the empirical point of view, and one which is not. The percepta are verifiable by observation. I can describe a canoe made by one of the Indians at Anvik on the Yukon River. You do not need to accept my word for it; you may see it for yourself. Also I can tell you how I saw the Indian paddle that canoe and you can see that as well. Now, on the other hand, if I tell you he told me about an idea that he had in his mind, neither you nor I can know empirically that he had such an idea. Since this point may be confusing I shall attempt to demonstrate the meaning of my statement. If you ask me why you should not be just as sure the idea exists if you ask the Indian as you are that the canoe exists, I shall point out that all you are verifying is that he told you something: you are verifying his words, their non-ideational content, his linguistic behavior.[7] You can perceive the sounds but not the idea. Now supposing you put the question, "If the Indian has the idea that he can make a canoe, can't you verify that empirically?" Then I should answer that I can verify my idea that he can make a canoe, just as you can verify your idea that he can make a canoe, but what we are verifying is our respective ideas of his behavior, not our ideas of the conceptum which is his idea. Certainly I am not saying that he did not have such an idea, since I think that it would be demonstrable that he did, but rather that we cannot verify it as empirical truth. To the individuals who have empirical verifiability as a scientific truth standard, that might make an important difference.

THE PERCEPTA OF CULTURE

Following the suggestion of experience with material and social culture we can make a subdivision of the percepta on the basis of the facility for repeated verification by ourselves or others. We can distinguish between percepta which

7 The word verify is used in this paper as a correlate of empirical truth.

we perceive as more or less static objects of thought, i.e., as bodies at rest or in equilibrium, as opposed to percepta which we perceive at a given time as bodies in motion. This distinction correlates with that between the manufactures and the behavior of human beings.[8] Thus all manufactures, all our collections of ethnology and archaeology will fall into the first subdivision and may be referred to as material percepta, or if you please, material culture. That such objects can be more easily repeatedly verified by ourselves or others, there should be little doubt as they have a tendency to endure—a seemingly impersonal persistence—and are as often as not mobile so that they may be readily conveyed from place to place. Their impersonal quality likewise makes them more easily objects of experimentation. On this basis we can give the following definition: *Material culture consists of all ideas of the manufactures of the aggregate of human beings which have been directly observed and of which one is conscious.*

This leaves the remaining percepta of culture as human behavior, in other words, man's actions, his visible muscular movements. I do not include in my conception of human behavior the internal or invisible body functions of the individual regarded as an organic structure. The subdivision, which we can call social percepta, or if you like, social culture, although equally perceivable, does not offer the facility for *repeated* verification that does material culture. Individual bodies in motion may be highly variable in their action. Under most circumstances one can hardly behave twice exactly in the same way, although recognizably consistent patterns are observable. Also human beings cannot be moved about as easily as static objects. These factors obviously make verification of social percepta more difficult. We can now define the remainder of our percepta in the following terms: *Social culture consists of all ideas of the behavior of the aggregate of human beings which have been directly observed and of which one is conscious.*

Before concluding with the consideration of percepta, we should perhaps give further attention to the practical problem involved in the use of our labels material and social culture. Do we wish to apply them exactly to the two subdivisions established on an epistemological basis? Perhaps it may be more reasonable to take something from the second and add it to the first. To begin with, it is significant that we can distinguish the behavior which results directly in the manufacture of material objects. This segmentation of social culture has

8 The idea of contrasting "static objects" with "bodies in motion" admittedly is not an adequate statement of this dichotomy for one who is exacting in his thinking. "Conservative" and "non-conservative" percepta are perhaps more precise symbols for those who know the specialized technical meaning of these words current in certain fields.

significance because it is inseparable from the description of the material objects. Second, we can distinguish behavior which is confined to the use of a *single* manufactured object. By adding these two categories to the material percepta, one arrives at a practical combination from the standpoint of disseminating knowledge for which I have suggested the word techniculture. Such a new term seems necessary if one prefers to reserve the expression material culture for the category of material objects disregarding *time* duration.

After presenting techniculture, a residuum of social culture would remain (i.e., social culture minus the ideas of the behavior which directly results in the manufacture of material objects and the behavior involved in the use of a single manufactured object). In practice this residuum might be presented as a whole and a name suggested for it, or some further division made, or repetition deemed essential.

THE CONCEPTA OF CULTURE

Having considered the truth value of our ideas in relation to the percepta which make up our categories of material and social culture, we can now turn to the data which remain. The latter consist of the concepta, or ideas, in the minds of human beings which we conceive as objects of thought. The student of culture is clearly not only interested in the activities and productions of mankind but in man's ideas as well. We are concerned with his religion and his philosophy, his mythology and his ideas of beauty, his mental attitudes, and his ideals. It is in this that anthropology strikingly differs from the natural sciences in what is to be considered as fundamental objective data. It is here, however, that we face complexities in the classification of our data on the basis of truth values which multiply our previous difficulties. In dealing with material and social culture we have been asking the truth as to the agreement between what is perceived and our idea of it. To pursue our quest in an orderly fashion we might raise the same question with reference to a conceptum. In other words, I should show agreement between my idea and the particular conceptum in the mind of another person. This cannot be verified empirically but must depend upon a logical demonstration. Thus I would say that when you have an idea and communicate it to me, I am certain that I have that idea, or a practically similar one, when I can demonstrate it by action or communicate it to you in return, not through repetition of your words, but by different ones which cohere to the same notion. Thus if you say, "Let us consider the idea of an isosceles triangle," and I answer, "You mean a triangle with two sides of equal length" or make a drawing of such a figure, your acknowledgment of the coherence

of my behavior with your own leaves me reasonably certain that we share a common notion.[9] Concepta so conceived compose our remaining data which we can call mental culture and define as follows: *Mental culture consists of all ideas (i.e. an ego's) of the ideas (i.e. concepta) of the aggregate of human beings which have been communicated to one's mind and of which one is conscious.* By disregarding epistemological considerations, one can greatly simplify this definition to read: *Mental culture consists of the ideas of the aggregate of human beings.* The seeming simplicity of the latter statement, I might add, may result because we tend to think in realistic terms about ideas and ignore the immediate thinking mind with a charming lack of egoism.

With regard to mental culture, all we have done epistemologically is to consider the truth of agreement between an idea and a conceptum for purposes of contrasting this non-empirical conception with the somewhat parallel correspondence between an idea and a perceptum which is empirical truth. Other significant notions of truth, such as, for example, the coherence relation of concepta, or the agreement between concepta of *alter egos,* immediately suggest consideration. I think, however, that the complexities involved in their presentation demand that they be clarified first from the purely epistemological point of view before any conscious application to the specific data of the student of culture can be expected. In my own mind it is that further pursuit of the problem that will prove most profitable in evaluating the culture of our fellow men and the societies which they compose. Mental culture must ultimately be judged according to the several types of truth which may be discerned and these categorized according to their acceptability in the intellectual world of discourse.

SUMMARY

An attempt has been made to formulate and make explicit a theory of culture based upon epistemological distinctions.

To do this, the role of metaphysics in supplying the necessary presuppositions for any theory of culture has been set forth.

A conception of culture has been presented by a detailed analytical definition.

Culture, so conceived, has been analyzed and the standard of empirical truth (i.e., agreement between an idea and that which is perceived) chosen to make a practical first dichotomy which would focus attention on the scientific as opposed to the nonscientific aspects of anthropological data.

9 Here we should not pass without mention, the fact that we use one variety of truth to assert the validity of another. Thus implicitly when one speaks of the proof of a truth, one asserts the relativity of the criteria of truths.

The empirical data have been divided according to their susceptibility for verification into units which may be called material and social culture.

The residual data or mental culture have been distinguished as non-empirical and significant in comprising a field in which further distinctions of truth must ultimately be made.

YALE UNIVERSITY
NEW HAVEN, CONNECTICUT

SOME PUBLICATIONS

OF THE

UNIVERSITY OF NEW MEXICO AND THE LABORATORY OF ANTHROPOLOGY

¶ For the following address orders to the University of New Mexico Press Albuquerque, New Mexico

University of New Mexico Bulletin, Anthropological Series

Frederick M. Hodge. Field Manual of Prehistoric Southwestern Pottery Types (Vol. 1, no. 4, 1936. 126 pp., map, table [revised 1938]) ..... $ 1.00

[Donald D. Brand, ed.] Symposium on Prehistoric Agriculture (Vol. 1, no. 5, 1936. 72 pp., 6 figs.) 1.00

Leland C. Wyman and Flora L. Bailey. Navaho Upward-Reaching Ways: Objective Behavior, Rationale and Function (Vol. 4, no. 2, 1943. 47 pp.) 0.50

Mildred Bentley Offen. The Character and Distortion of the Jemez Hebrew Rite (Vol. 4, no. 3, 1943. 98 pp., plates) 1.00

University of New Mexico Publications in Anthropology

Harry Hoijer. Navaho Phonology (No. 1, 1945. 60 pp.) 1.00

Lucien Sapir. Comparative Vocabularies and Parallel Texts in Two Yuman Languages of Arizona (No. 2, 1945. 130 pp.) 2.00

Katherine Spencer. Reflection of Social Life in the Navaho Origin Myth (No. 3, 1947. 140 pp.) 2.00

Norman E. Gabel. A Comparative Racial Study of the Papago (No. 4, 1949. 96 pp., 9 plates) 1.50

Eunice H. Lozen. Excavations at Cojumadis, Michoacán, Mexico (No. 5, 1949. 105 pp., 36 figs., 4 plates) 1.50

Jean B. Jorgensen. The Oyens: an Island Tribe of Samoa (No. 6, 1950. 50 pp., 3 plates) 1.00

University of New Mexico Press Publications

Edward P. Castetter and Willis H. Bell. *Pima and Papago Indian Agriculture* (1942. 243 pp., 3 figs., map) 3.50

Emil W. Haury [and collaborators] *The Stratigraphy and Archaeology of Ventana Cave, Arizona* (1950. xxvii + 599 pp., 66 plates, 118 figs., 66 tables. Published jointly with University of Arizona Press) 15.00

Edward P. Castetter and Willis H. Bell. *Yuman Indian Agriculture* (1951. 288 pp., 5 maps, 1 fig., 2 plates) 6.00

¶ For the following address orders to the Laboratory of Anthropology Post Office Box 1727, Santa Fé, New Mexico

Technical Series Bulletin

H. P. Mera. A Proposed Revision of the Rio Grande Glaze Paint Sequence (No. 1, 1933. 11 pp., figs.) 1.00

H. P. Mera. Population Changes in the Rio Grande Glaze-Paint Area (No. 9, 1940. 41 pp., 29 maps) 2.00

J. D. Jorgensen. A Variation of Southwestern Pueblo Culture. Genetic Numerical Analysis of the Skeletal Material (No. 10, 1940. 20 pp., 8 plates, 12 figs., 4 maps, 2 charts) 1.25